

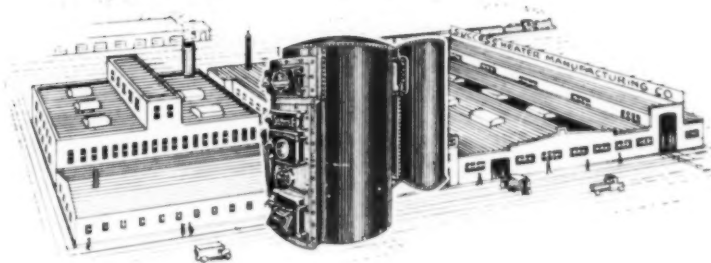
American Artisan and Hardware Record

Vol. 95, No. 7

CHICAGO, FEBRUARY 18, 1928

\$2.00 Per Year

Something to Consider



The Factory Behind the Heater

IT IS just as important to know the factory behind the heater you sell as it is to know the heater itself. That is why we welcome every opportunity to tell dealers about our facilities, our standards of quality, our plans of co-operation. Testimony from numerous dealers is evidence that the SUCCESS HEATER franchise is a real opportunity. To get the whole story, just get a copy of our book which describes our complete line of heaters, dealer helps and other valuable information. Investigation involves no obligation -- so send the coupon today.



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The Greatest MUELLER Value Ever Offered!

Better than ever—
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New type grates—

THE 1928 model Mueller Full-Front Return Flue Furnace is without doubt one of the greatest furnace values ever offered the sheet metal trade! Here is an exceptionally sturdy, quality-built furnace of superior design and construction. With the Mueller Full-Front Return Flue you can meet competition with a better product and an attractive price. All castings fit together in deep cup joints and the upper firepot section has, in addition, a sealed cup joint, absolutely preventing leakage of smoke or gas. Radiator is one-piece construction. Full-front shield is made in two sections which fit in place without bolts or screws. Has projecting feed section and ashpit. Doors, feed mouth and ash-pit openings surface ground. Choice of two types of grates and shakers.

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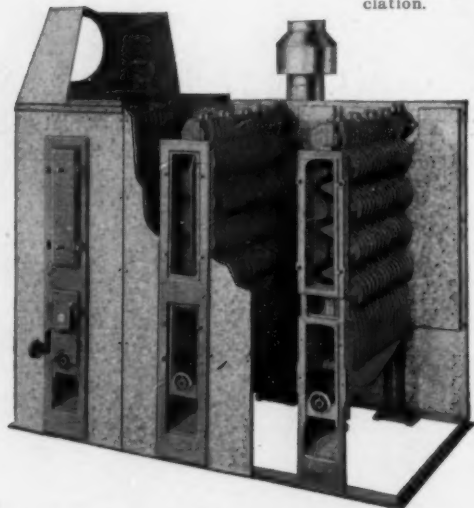
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Duplex triangular grates, operated by crank shaker only. These grates make complete turn, exposing new grate surface to the fire with each operation, leaving two surfaces to cool.



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The new-day heating plant! Tremendous market opening up for this improved, ultra-modern heating system. Tested and approved by American Gas Association Laboratories. Automatic, tamper-proof operation.



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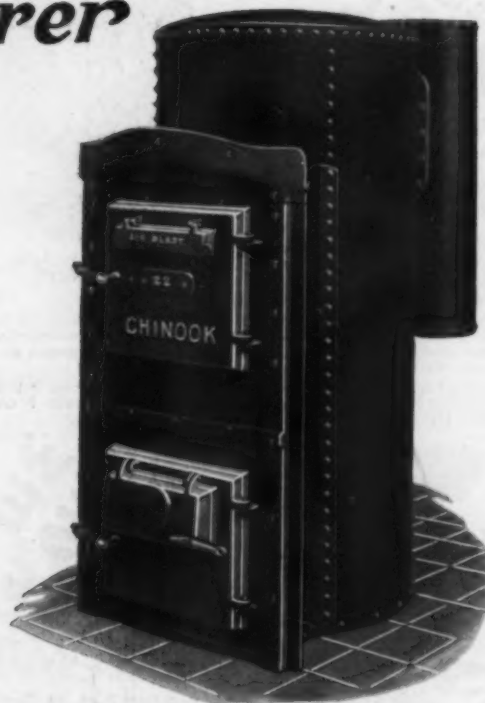
Chinook Riveted-Steel Construction Has Never Been Duplicated By Any Manufacturer

at a price
as low as

\$56.00

[Less Your Cash and
Quantity Discounts]

High Quality at Low Price
Makes the Chinook a Steel Furnace
for Close Competition Work



Until the experienced engineers who design and build powerful railway locomotives resort to new methods we shall continue to claim that riveted and calked seams are the best where permanent gas-tight construction is needed. Other methods of furnace construction are cheaper but not good enough for the Chinook, even tho it is an exceptionally low priced furnace.

We have designed the Chinook riveted steel furnace to meet the demands of the dealer who is called upon to furnish a satisfactory heating plant for the contractor, builder or home owner where price is an important consideration. For \$56.00 we have produced a riveted steel furnace of ex-

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Chinook Fire Pot and
Rocking Grates

Only quantity production enables us to produce a furnace of the Chinook type at such a low price. It will pay you well to investigate further our claims for the Chinook furnace. Order a sample Chinook furnace and compare it with other makes and you will be surprised to note the thickness of the steel, the fine workmanship, the gas-tight construction and the attractive general appearance of the Chinook.

The Chinook Steel Furnace is manufactured and sold
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Equator Furnace Company, subsidiary companies of

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**a
New Steel
Furnace**



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on a warm air heating job.*

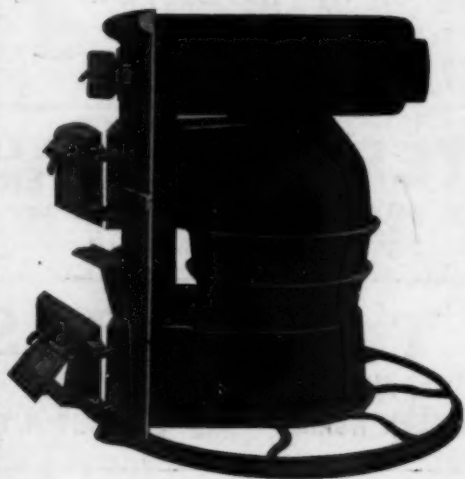
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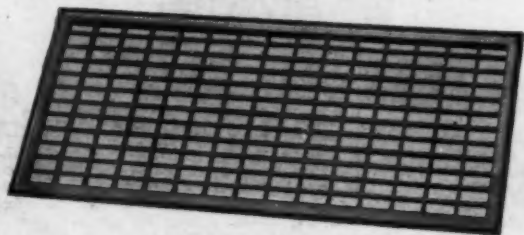
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SUPERIOR DEALERS ARE EXCEPTIONALLY LOYAL—WHY?

New!

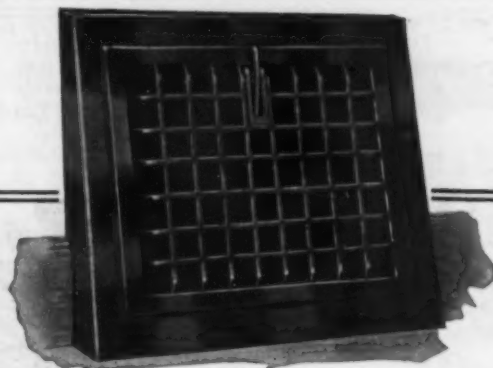
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NOW MADE WITH BEVELED EDGES

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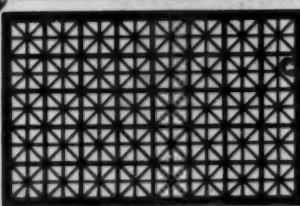
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Brookside Park CLEVELAND, OHIO

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NEW

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EASY to install; simply cut a round hole in smoke pipe and CLAMP on the TEELA check draft.

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THE CLEVELAND CASTINGS PATTERN COMPANY
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PATTERNS

FOR STOVES AND HEATERS FIRST-CLASS IN WOOD and IRON
VEDDER PATTERN WORKS ESTABLISHED 1835 TROY, N. Y.

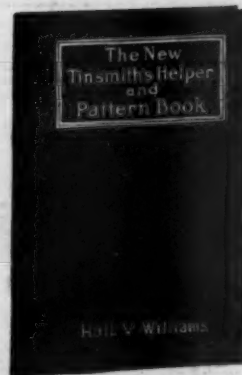
IRON AND WOOD STOVE PATTERNS

QUINCY PATTERN COMPANY
QUINCY, ILLINOIS

352
Pages

247
Figures

165
Tables



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Leather
Binding

Measures
4 1/2 x 5 in.

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This Book Covers Simple Geometry and Every Phase of Modern Pattern Cutting

from the making of every type of Seam, Lap and Joint, to Conical Problems and Tinware, Elbows, Piping, Ducts, Gutters, Leaders, Cornice and Skylight Work and Furnace Fittings.

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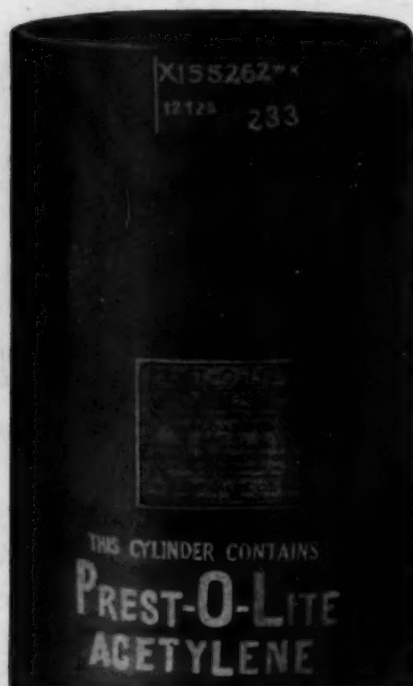
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Every time this new member of the Oxweld family is demonstrated, it makes a convert.

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It can be used with either low or medium pressure acetylene. And you can't make it back-fire.

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and
Sheet Metal Work

American Artisan

and Hardware Record

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ADVERTISING AND EDITORIAL STAFF

Etta Cohn
J. F. Johnson

Franklin Butler
Chas. E. Kennedy

G. J. Duerr
Frank McElwain

Eastern Representatives: M. M. Dwinell, J. S. Lovingham, 156 Fifth Avenue, New York City

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THANK YOU, MR. DEETS!

Aurora, Illinois, February 13, 1928.

To AMERICAN ARTISAN:

The article by Stanley A. Knisely in the February 4th issue of AMERICAN ARTISAN is one of the best I have ever read, and I have been a reader of your paper for over thirty years. My wish would be that this article could be written across the sky so that every sheet metal contractor in the United States could read it. I agree with Mr. Knisely in regard to getting out and hustling for the other fellow's dollar before someone in another line who works the pay as you earn system gets it. Hand out more, Brother Knisely, if you have anything else in mind that will at least set some of our contractors to thinking.

F. G. Deets.

\$100.00

IN CASH PRIZES

For Photographs of Attractive Window Displays that have sold Warm Air Heating or Sheet Metal Work

AS an experiment in 1927, the Illinois Travelers' Auxiliary offered \$100.00 in Cash for photographs and descriptions of window displays featuring sheet metal work, warm air heating, roofing and kindred lines.

The prize winners were:

First—Pekin Hardware Co., Pekin, Illinois.
Second—Accurate S. M. Wks., Chicago, Ill.
Third—McKay Bros., Evanston, Illinois.
Fourth—August Hardten, Ottawa, Illinois.

Interest was so keen that this year again we are prompted to make the same offer:

First Prize \$40.00 Fourth Prize \$10.00
Second Prize, \$25.00 Fifth Prize \$5.00
Third Prize \$15.00 Sixth Prize \$5.00

You may enter as many photographs and descriptions as you desire. Each photograph must be accompanied by descriptions of how the window displays were arranged

and the materials used. The description is important and must be adequate. These photographs and descriptions must reach the office of the Auxiliary Secretary, Etta Cohn, 620 South Michigan Avenue, Chicago, Illinois, not later than April 6, 1928.

Each photograph and description must be signed by a fictitious name or device and the same name or device must be put in a sealed envelope containing the real name and address of the contestant.

This sealed envelope must be enclosed with the photograph. The photographs and descriptions will be judged at the convention and announcement of the prize winners will also be made at that time.

This competition is open to any and all sheet metal contractors, warm air furnace installers or roofing contractors.

The Travelers Auxiliary reserves the right to submit for publication in the various trade papers any or all of the photographs and descriptions submitted.

THE CONVENTION WILL BE HELD APRIL 11 and 12
FORT ARMSTRONG HOTEL ROCK ISLAND, ILLINOIS

Ask the salesmen who call on you for their help in trimming your windows. They will be glad to give you suggestions and help you develop your ideas.

ILLINOIS TRAVELERS AUXILIARY

Etta Cohn, Secretary

620 So. Michigan Ave., Chicago

They Judge the Job • • by the Furnace

Your customer can see no difference between a good job and a cheap one—except for the furnace.



THE buyer cannot examine the installation before he pays his money. And he doesn't understand the intricacies of "Standard Code" or fully appreciate the importance of workmanship. His only visible measure of the better job you are selling him is the furnace. He judges the quality of the job by that of the furnace.

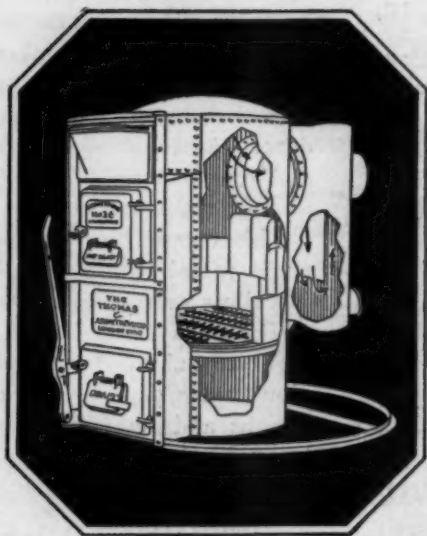
Thus, for successful selling, as well as for successful operation, a good job and a profitable one depends on a good furnace.

Such a furnace will be made of steel, of course—heavy copper bearing boiler plate, riveted and welded to best withstand the stress of contraction and expansion and remain gas and smoke tight forever. Scientifically correct in design—economical. That's the guaranteed ARMSTRONG—the furnace you'd select for yourself.

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*The
Boiler Plate*

ARMSTRONG FURNACE



American Artisan and Hardware Record



Vol. 95

CHICAGO, FEBRUARY 18, 1928

No. 7



Sheet Metal Ventilators on Chicken Houses Near Kennett Square, Pa.

Rural Sheet Metal Sales MOUNT as Its Utility Becomes More Widely Known

Farm Insurance Premium Rates Decline as Sheet Metal PROTECTS BUILDINGS

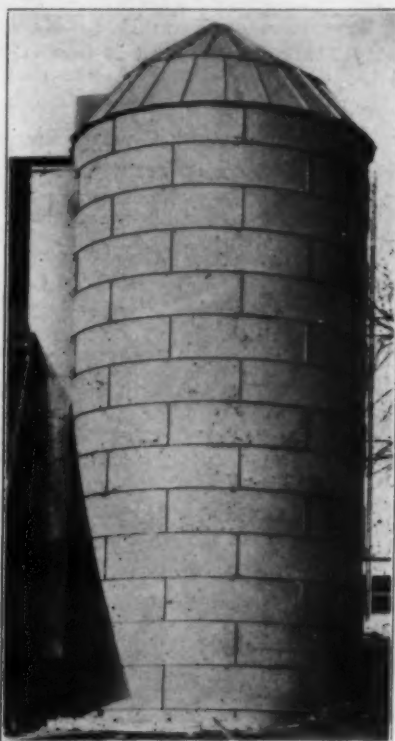
By C. H. THOMAS

THE great value of sheet metal in use today in the many different things that are being manufactured, has no better illustration than the part it is playing in farm life, especially since the matter of fire protection means so much; sheet metal being the ideal material for the farm and its many different ramifications. These will be described in detail in this article.

Take for instance the farm buildings that are covered with tar paper, or other wooden shingles; these form a constant menace to life and property, while sheet metal, which lasts for years and will not rot, does not burn and costs less in proportion is the best known material that man has been able to make that has a high insurance value as a roof covering; every farmer knows this and yet he takes great chances and many losses each year; his better judgment will and should tell him of the great value of sheet metal as a roof covering.

In the first place, metal roofing

has the advantage of being fire-proof. It will not burn, and a safeguard against the hazard of inflam-



Sheet Metal Silo at West Chester, Pa.

mable materials, it acts as a fire stop or blanket against the spread of flames.

The durability of sheet metal is unquestioned. Its case does not have to be proved by weather tests and new experiments. There are examples enough of sheet metal roofs that have given extraordinary service to convince anyone of their ability to stand up under the most severe service.

Lightning protection may be built into a building with a sheet metal roof, properly grounded. What other type of roofing can serve in the capacity of lightning protection?

A sheet metal roof, compared with any other type of roofing material that will not burn, is lighter, easier to handle, more weather tight, has greater resistance to vibration, shock and impact than any other. It is safer to work on during maintenance and repair work, and finally it has a high portability or replacement value in case of alterations or remodeling, all of



Sheet Metal Brooders

which have to be taken into account on any farm.

Notice how trim looking the sheet metal roof is on some farm buildings you have seen recently; a galvanized roof does not have to be painted for many years and still has a longer life than any other known roofing material. Cost enters here. In addition to all of these advantages, the cost of sheet metal roofing is low, it may be purchased in a variety of designs, it may be painted any color to suit its surroundings and it may be purchased from practically any one of many sheet metal contractors in every city, town and hamlet in this country and abroad. Other types of roofs require heavier supports under them; not so the sheet metal roof, whose advantages have been pointed out to you.

In ventilators, chicken houses and brooders, roofs, shingles, corrugated roofing, gutters and many other sheet metal articles, the farmer has a lasting ally, because of the fact that sheet metal will outlast other material and is cheapest in the long run. An educational treatise, such as is being carried out in this country in regard to sheet metal, has proven beyond the shadow of a

doubt the great superiority of sheet metal in countless ways in use on the farm, where economy of money is of the prime importance



Metal Shingles That Have Been on Farm House Near West Chester, Pa., for Twenty Years and Are Still in Good Condition

and need today.

In metal shingles, which are being used to add beauty in home

building, they may be obtained in the Spanish metal tile or as porcelain enameled shingles. The Spanish metal is of commercially pure iron and is very durable.

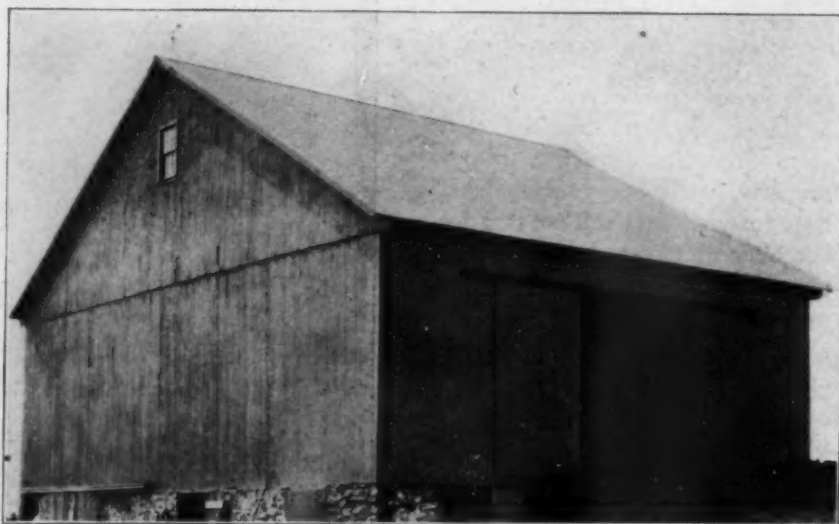
The corrugated style is also very much used; the corrugations give added strength and, therefore, close sheathing is unnecessary. Where unusual strength is required, the one and one-quarter inch corrugated roofing is the most suitable, since the extra corrugations add stability.

Ease of application and repair is another reason why metal roofing is so popular in using it on the farm buildings generally. The sheets may be nailed direct to the timbers or fastened to the purlins. In case the roof needs repair, the sheets may be removed and replaced one by one.

They can often be salvaged and used on other buildings.

On cow barns sheet metal ventilators are an evident necessity these days; proper ventilation is more than necessary for cattle to be kept in the best condition in large buildings.

If you know of some building which is roofed with sheet metal, send us a photo or tell us about it.



Metal Roof on Farm Barn Near New London, Pa.

Why Create Window Display for Product Used in Basement?

Tie Up Your Product With Public Interest Items for Good Sales Results

By GEORGE J. DUERR*

I HAVE been asked by your program committee to contribute a few words on "Hints on Merchandising Warm Air Furnaces." For this courtesy I want to thank you very much indeed. In my talk I have selected the window display and sales room rather than advertising in general for the simple reason that to my mind adequate window displays and proper arrangement of warm air furnaces in the sales room are by far the most essential, but the most neglected phases of the marketing of warm air heating systems. At the very outset of my address I want to ask this question: "Why should you create a beautiful showroom and window display for a product used in the basement?" Here no doubt is a query that has entered and stuck in the mind of every man present.

And in reply I answer that merchandise to be sold must be displayed. It not only must be displayed, it must be so arranged that it will create a desire for ownership in the mind of the prospective purchaser. Those statements need no reiteration. They are so well known by merchandisers that they seem almost too trite to mention here. And display is absolutely necessary to the successful merchandising of warm air furnaces. Here's the reason: Suppose, for instance, that I were to walk down the main street of your home town with the express purpose of judging impartially which one of the industries represented there maintained the best window displays and the most inviting looking sales

rooms. Where would your display and sales room figure, at the head of the list or at the bottom?

Suppose again that I am any ordinary individual living in any one of the towns in which you men are doing business. I know little or nothing about warm air heating or any other kind of heating. In the natural course of events I become a home builder and am confronted with the problem of heating. Naturally I want a heating system that is going to do the job as efficiently and as economically as possible. Where am I to get such a system? If you are honest with yourselves, do you think that I would be attracted to the warm air heating industry or to any one of your places of business to have my wants and desires in this respect gratified?

I wonder if you men have done anything in the way of making a display or sales room that would have started a seed germinating in the back of my mind long since that would cause me now to seek you out for information and guidance on my heating requirements? Under the present conditions of the average sales room and window display in the warm air heating industry I fear that quite the opposite idea would have already been implanted in my mind, and that if I want satisfaction in my heating system I had better steer clear of a warm air heating system. This brings us face to face with that old, old saying that external neatness is an indication of an orderly mind. Your window display is an indication of your character. The warm air furnace installer who has pride in his work also has pride in his display, and the man whom I will seek out to install my warm air heating system must give me that external appearance that he has not

only pride in his work, but that he has the ability to put that furnace in properly, because that is the only insurance I have that he knows what he is talking about and that I will receive the satisfaction anticipated.

This question of the necessity for adequate displays is not peculiar to the warm air heating industry. The same question presented itself quite recently to no less a personage than N. H. Witherspoon, Sales Manager of the Ruud Manufacturing Company, makers of a water heater, a company that has recently erected and equipped one of the finest sales rooms for the proper display of a water heater that is to be found in the entire city of New York. Prior to the erection of this new sales room the company had been even more skeptical than you men are about the value of a display room and window for a product that goes into the basement out of sight. They thought as many of you men are thinking right now, that to erect a sales room and window for the display of such a product as a water heater would be an unwarranted expense.

However, the problem of marketing water heaters continued to rankle in the breasts of their salesmen, and finally the company was prevailed upon to engage an architect to design a show room and window in which a Spanish effect was carried out in detail from rough plaster walls and arched ceiling to tapestry and table runners. The office was placed upon a Spanish balcony, off the floor and out of sight of the prospective customers. And did this novel idea pan out as expected? I shall permit Mr. Witherspoon to tell you in his own words. "This arrangement has proved itself a success," says Mr.

*Address delivered by George J. Duerr, Editor AMERICAN ARTISAN, at convention of Indiana Sheet Metal Contractors' Association and Indiana Warm Air Heating and Ventilating Association at Denison Hotel, Indianapolis, January 24 to 26, 1928.

Witherspoon. "The quiet atmosphere makes demonstration ideal, and even the most refractory of prospects loses his belligerency before he can get well started. Demonstrations are highly successful in such a setting as ours.

"Because our product's beauty is almost a minor point, our case illustrates how a high-class show room can be valuable even though the product does eventually go out of sight. And our experience goes to prove that almost any article, even though it has no inherent beauty, can be displayed to advantage in an attractive, even if unallied, setting. Further, an attractive sales room is a stimulus to the salesmen of the firm. They need never be ashamed to send in prospects to look over the product at first hand in the show room. With a good-looking show room and window display to set off the quality of his merchandise and the standing of his company, the salesman is eager to send in prospects, and this is especially true where the product is one that cannot be carried around in sample form, but can be shown only by means of illustrations. A photograph is not enough to enable the average man to do a thorough job of selling." These are important points to remember. (I am not advocating that all you men rush out and employ architects to design Spanish sales rooms for you, or that you enter upon a program of spending large sums of money upon display windows and sales rooms. That would indeed be foolish.)

I merely cited this example of the water heater company to reveal to you gentlemen the attitude, based upon actual experience, of one sales manager whose product in characteristics is very, very similar to the warm air heating system.

Thus it is shown that if there is any one thing that can be said to be of greatest importance in the marketing of a warm air heating system, it is proper display. The accepted truism is that in order to sell goods the merchandiser must tell people he has them and how ownership of those goods is going to add to the comfort, convenience

and the enjoyment of life by their possession.

Mr. Witherspoon struck a responsive note when he said, "our experience goes to prove that almost any article, even though it has no inherent beauty, can be displayed to advantage in an attractive, even if unallied, setting." This is true for the simple reason that people in all walks of life are compelled to use heating system, water heaters, etc., regardless of how uninteresting these articles appear to be from a beautiful standpoint, and folks in the upper stratas of society (the folks you men wish to interest in the use of warm air heating system) will go out of their way to

THANK YOU, Mr. Lander

□

Lansing, Mich., 1-23-28.

American Artisan
620 South Michigan Avenue
Chicago, Ill.

Gentlemen:—

Please send me another copy of your issue January 14th.

Your splendid article on the recently adapted Chicago furnace code caused me to lose my copy to the Building Inspector and Fire Chief of Lansing.

Yours truly,

(Signed) C. R. LANDER.

have demonstrations on these necessities if they know where they view them in a pleasing environment. These folks unhesitatingly place confidence in the man who keeps an attractive store and window; they are thus given an assurance that the quality of the goods he sells is of the highest; they gain confidence in his ability to put those goods into service in their basements in a proper and workmanlike manner.

In order to show in what light business men in other lines of industry regard the window display and sales room, I want to say that advertising agencies in all parts of the country are beginning to incorporate the window display into their regular program of service.

Laurence G. Meads of the Black-

man Company, one of the larger advertising agencies in New York, writes in *Printers' Ink*, "With the development of the cash-and-carry grocery and automobiles, the woman is shopping around. There is an excellent chance to influence her purchases at the last moment, after she has actually reached the store. There was nowhere near the same chance a few years ago when she had her order book and ordered over the telephone."

Let us carry the analysis a little further. If the sales room and the window display were not a necessary and indispensable part of the retailer's equipment, then why is it that millions of dollars are tied up in such displays in every city in the United States, the larger the city the more elaborate the display. Why has the automobile industry gone into this particular phase of marketing its product so extensively? Why the clothing industry? Why the furniture industry and the electrical industry? Even the travel bureaus, who have little more than that very intangible thing known as beautiful scenery to sell, recognize the efficacy of the window display to create the desire for their service.

Attractive windows and store arrangements are not difficult to make. True, one must first have a window that will lend itself to the staging of displays and a store front in keeping with the dignity of the window. But in designing the actual display, the idea you must keep uppermost in mind is that you wish to interest people in your goods and your service. You wish to draw public attention to yourself. And one of the best ways of doing this is to associate your product and service with some item that is holding public interest. An excellent opportunity of doing this is given you in the approach of the six or seven legal holidays in each year. Football scores of the big games, associating the idea of coming home to a comfortably warm house after a cold seat at the game is a capital idea for a display. Sister and brother are having a birthday party and must have a warm home

in which to entertain their friends. Thanksgiving Day is another. What is the meaning of Christmas cheer without a warm home? St. Valentine's Day with a furnace tied up with a big ribbon. All of these special holidays can be utilized in this manner to tie up warm air heating with public interest in such a way as to get the business before the public and keep it there.

In the sheet metal business there is an even greater range of possibility in this direction. Last summer at the time Lindbergh was making his debut to fame I saw one progressive sheet metal man who had a picture of Lindy in his window surrounded with a lot of metal products all arranged in a very artistic metal frame. Another warm air furnace installer made a very effective use of the motion picture projector. There are endless ways in which the furnace installer can tie in with public interest and thus keep his product and his store before the public all the year round. The only requisite to their construction being a little time and thought, but not a great deal of actual cash outlay.

I was asked by your convention committee to give you some hints on how to sell more furnaces. Now men, if you really want some hints on how to sell more furnaces in 1928 than you ever have sold before, do not hesitate to arrange for the construction of a window display and sales room that will give your merchandise an equal chance with the automobile, the radio, the electric washer, the new dining room set. Act upon a tip given to you inadvertently by merchandisers who have real competition to buck and your sales problems for the year 1928 will be greatly reduced, your sales will increase, while your cost per unit of selling will diminish.

Julius A. Pfeiffer Joins Milcor Organization in Fireproof Materials Division

Julius A. Pfeiffer, well known throughout the building material trade as Vice President of the

Northwestern Expanded Metal Company, Chicago, became Director of Sales of the fireproof materials division of the Milwaukee Corrugating Company recently.

While Mr. Pfeiffer's headquarters will be at the main Milcor plant in Milwaukee, he will spend considerable time at each of the other three Milcor plants at Chicago, Kansas City, and La Crosse, Wisconsin. A comprehensive dealer campaign is being organized under the direction of Mr. Pfeiffer and he will also work with the various Milcor district managers in their respective territories.

U. D. Sweigard, Prominent Erie Sheet Metal Con- tractor, Dies

Uriah D. Sweigard died recently at Erie, Pennsylvania, where he had been a prominent sheet metal contractor for a number of years.

He was a member of the Sheet Metal Contractors' Association of Erie, had served as secretary for a long time, and was held in high esteem by his fellow members and regarded as one of the best men engaged in the sheet metal business.

At a recent meeting of the Erie Association the following resolutions were adopted:

Whereas, The great and supreme Ruler of the universe has in his infinite wisdom, removed from among us one of our worthy and esteemed fellow laborers, Uriah D. Sweigard;

And, whereas, the long and intimate relations held with him, and the faithful discharge of his duties in the Sheet Metal Contractors' Association of Erie, makes it eminently befitting that we record our appreciation of him; therefore,

Be it resolved, That the wisdom and the ability which he exercised in the aid of our organization by his service, contributions, and his counsel, will be held in grateful remembrance;

Resolved, That the sudden removal of such a life from among our midst leaves a vacancy and casts a shadow that will be deeply

realized by all members and friends of this organization, and will prove a serious loss to the community and the public.

Resolved, That with deep sympathy and with the bereaved relatives of the deceased, we express our hope that even so great a loss to us all may be over-ruled for good by Him who doeth all things well;

Resolved, That a copy of these resolutions be spread upon the records of this organization, a copy forwarded to the bereaved family, a copy forwarded to the National Association Journal, and a copy printed in the local papers.

Sheet Metal Contractors' Association of Erie.

(Signed) T. M. Braeger, Pres.

H. G. Hartline, Secy.

Indianapolis Heating Fete O. Voorhees in Century Heating's New Building

The Indianapolis Sheet Metal and Warm Air Heating Contractors' Association gave a housewarming for O. Voorhees of the Century Heating Service Company, Indianapolis, in the latter's new building at 633 South Delaware street. The receiving was done in the office and show room, but early in the evening the guests scattered over the plant examining the sheet metal shop and the warehouse, loading pit, shipping floor and incidentally the heating plant, which happens to be a XXth Century industrial furnace equipped with a fan.

After examining the plant and complimenting Mr. Voorhees on its convenience and completeness, those present gathered in the sheet metal shop, which had been temporarily equipped for dancing, and spent the remainder of the evening pleasantly dancing with a few tables of cards for those inclined that way.

President Homer Selch represented the Indianapolis Association and President Bill Waters represented the state organization. The jobbers were well represented as well as the city organization. There were around one hundred persons present.

Farm Ventilation Offers Abundant Outlet for Sheet Metal Products

Hog Raising Requires Adequate Ventilation and Skylighting

By PROFESSOR A. J. MACK*

THIS is the seventh of the series of articles on Farm Ventilation. In this article the ventilation of hog and sheep houses will be discussed.

a ventilating system be included in the design of the satisfactory hog house.

The climatic conditions have much to do with the design, con-

build and yet answers the purpose fairly well. In houses of this type there are generally no ventilator ducts and air enters by infiltration and leaves by means or one or more sheet metal ventilators on the comb of the roof. In a building of this type there is generally no ceiling and the windows in the roof can be judiciously placed for maximum light in the pens.

Oftentimes a one-story gable roof with pens on either side of the center aisle are used for community hog houses. When such types are used the windows could well be arranged in the walls and in the lower portions of the roof. This would make possible the placing of a ceiling over the central portion of the house, leaving a way for air to pass between the ceiling and roof. This double roof makes the house warmer in the winter and cooler in

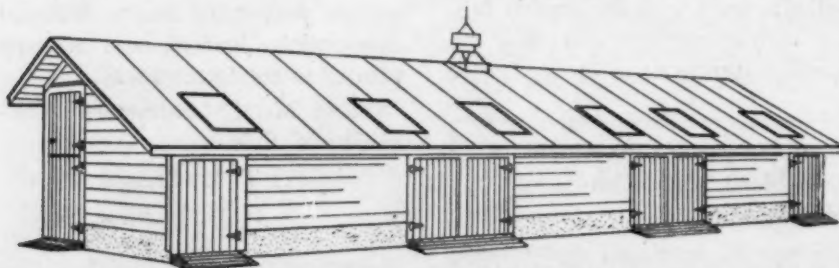


Figure No. 14. Perspective view of a type of hog house commonly used in the more temperate climates

Hog raising has been one of the most profitable sources of income for the farmer in the corn belt. The proper housing in many cases has not, however, been given the careful attention which it deserves. Contrary probably to the general opinion, the hog is in more need of protection from cold than most farm animals. Although it has a layer of fat for protection, it is almost entirely devoid of a protective coat of fur as other animals have. Even poultry has a protective coat in its feathers.

Sunshine and fresh air are highly important to the welfare of the hog. This all means that the hog should be housed in warm quarters in winter. The quarters should be well supplied with windows for sunlight. This is especially true at farrowing time, ordinarily about March 1st. Young pigs are very susceptible to colds, from which they recover with difficulty if at all. Such being the case, it is almost necessary in the colder climates that

struction and location of hog houses. The location of the windows is important in order that the maximum benefit may be derived from the sunlight at farrowing time.

Figure 14 shows a type of hog house often used in the temperate climates. This particular type of house is not an expensive one to

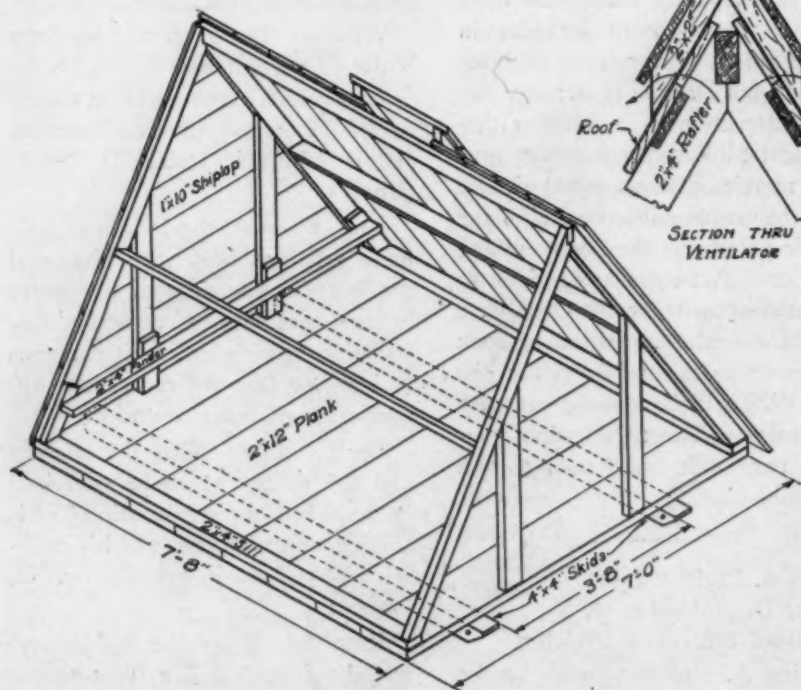


Figure. No. 15. An "A" individual hog house of the portable type

*This is the seventh of the series of articles on Farm Ventilation by Professor A. J. Mack of the Department of Mechanical Engineering, Kansas State Agricultural College, Manhattan, Kansas. This series will be concluded with the eighth installment.

the summer by reducing the heat transfer. Houses of this type generally depend upon infiltration for fresh air and upon roof ventilators for removing excess moisture, odors and foul air. No inlet or out-take flues are provided. These houses are generally used for farrowing pens and no great number of the larger hogs are housed therein.

Figure 15 shows a Kansas "A" individual house sometimes used in the more moderate climates. It is, of course, movable as indicated by the skids. The insert shows the method of removing excess moisture, odors and foul air. An efficient sheet metal roof ventilator could well replace the wooden arrangement shown in the cut.

In the colder climates a better constructed, more substantial building would be justified from a heat transfer standpoint. Infiltration alone would not be a satisfactory method of supplying fresh air, especially in houses designed for a large number of hogs. In such cases designs of intakes similar to those employed in dairy barns previously described in these articles are desirable. Also a system of out-take ducts connected to one or more automatic roof ventilators should be employed. These are especially desirable in the very tightly constructed well insulated buildings.

According to an A. S. A. E. committee report on farm ventilation 240 cubic feet per 300-pound hog is the allowable space expected to be heated by the hog itself. According to U. S. D. A. Bulletins approximately 1,400 cubic feet of air per hour should be provided for ventilating purposes for a hog breathing 46 cubic feet of air per hour. Thirteen square inches are allowed per hog in the out-take flues. Of course, climatic conditions and construction must be considered in the design.

The design of the building itself has much to do with the heating and ventilating requirements. In all animal shelters artificial heat is to be avoided if possible and the animals themselves must provide their own heat. In the colder cli-

mates then care must be used in the selection of the type of construction as well as materials of construction to reduce the heat losses due to conductivity to a minimum.

The least heat loss would result from a two-story barn wherein the upper story is used for storage. This type of building is well adapted for a complete ventilating system. Of the more conventional types of structures the monitor roof building has comparatively large heat losses. In the monitor type of building the warmer air rises to the top of the building where the windows are located and as the windows have a high conductivity factor much heat is lost.

The housing of sheep is very similar to that used for hogs. The sheep will breathe about two-thirds of the volume of air which a hog will breathe and the air requirements for ventilating purposes are also approximately two-thirds of those required for hogs. As in the case of the hogs, the very young individuals must be considered and the buildings made especially suitable to their particular needs, which will also meet the requirements of the older animals.

The eighth and concluding article of the series will deal with farm ventilation in general together with factors which affect it.

Indianapolis Local Sheet Metal Changes Name to Include Warm Air Installers

The Indianapolis Sheet Metal Contractors' Association at its regular meeting for February changed its name to the Indianapolis Sheet Metal and Warm Air Heating Contractors' Association, this change conforming to the recent policy of actively interesting the warm air heating contractors in the organization. The recent membership drive, which has trebled membership, has brought in a very large number of the heating contractors.

The meeting nights have also been changed to the second and fourth Wednesdays in each month, their former meeting nights, the

first and third Wednesdays, conflicting with some other meetings which their membership is interested in.

The terms of office have been changed from six months to one year, setting the election dates as the first regular meeting in March of each year. The program committee was instructed to formulate plans and programs for as long a period ahead as is feasible. It is felt that this plan will result in better balanced and more comprehensible programs as well as in better publicity and in increased interest and attendance.

The Indianapolis association is showing the greatest activity it has shown for some years. It is expected that it will now be the factor in controlling and upbuilding this craft that it should be in the community.

Illinois Sheet Metal Program Committee Hard at Work

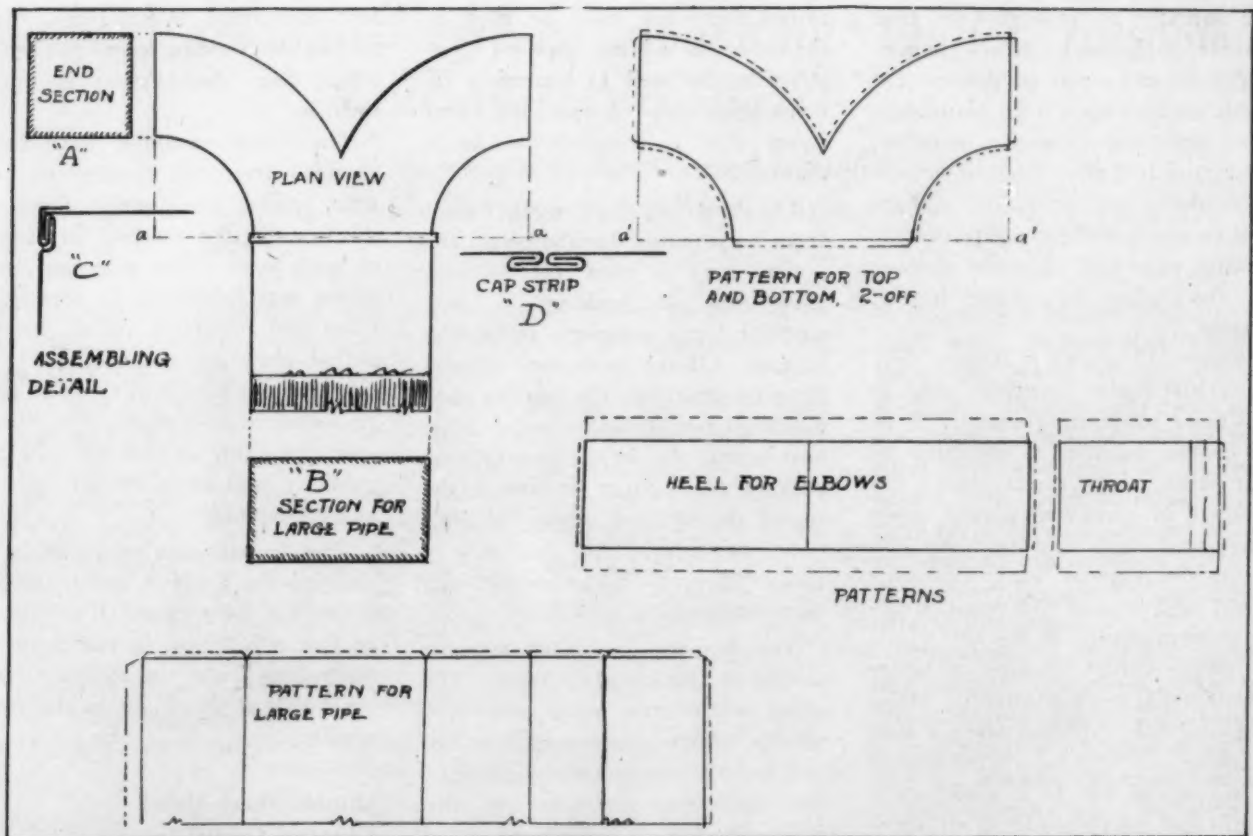
Rock Island is all set for the Illinois State Sheet Metal Contractors' Convention, which will be held in the Fort Armstrong Hotel, April 11 and 12, according to P. M. Lorenz who attended committee meetings in that section last week.

Approximately 25 members participated in the meeting on convention arrangements, and from this it can be readily perceived that great interest is being shown by the tricity sheet metal contractors.

Auxiliary members present at the meeting were P. M. Lorenz, W. D. Dukette, Sam Burgess, Oliver Ingledew, Frank Fraser, Lew Denoyer. The program of events scheduled for the program will be published as soon as it has received the approval of the entire committee.

Kentucky Sheet Metal Men to Meet March 5

The Sheet Metal & Roofing Contractors' Association of Kentucky will hold its annual convention at the Tyler Hotel, Louisville, March 5, 1928. The session will begin at 9:30 a. m.



Patterns for Double Elbow

Constructing Patterns for Double Elbows Requires Considerable Practice

Experimental Work Should Be Done on Scrap Material

By O. W. KOTHE, Principal St. Louis Technical Institute

IN VENTILATION work double elbows are a common occurrence and so we show a drawing covering this problem. In pipe work where the end sections and the main pipe are of the same width the problem is very simple, because then the mere drawing of the plan view or the outline of the elbows becomes the pattern, only edges are allowed for assembling. A reproduction of this is shown to the right of our plan view. In practice the plan view would be described directly on a sheet of metal and such edges allowed as the detail "C" indicates also the detail "D." In this case sections "A" and "B" have the same width, and so the throat and the heel patterns are very simply arrived at by picking the girth from the plan

view of elbow.

Such elbows can be easily connected to a main stack with a cap strip "D." These strips are slit in place from one side to another which holds the elbow securely in place. In getting out the pattern for the large pipe it is often advisable to notch the corners as our dotted line shows which makes it easier to join the cap strip. Another point that must be carefully observed is to see that the edges are all the same width and, therefore, it is well to bend these in a break before forming the pipe. Where edges must be bent after the pipe is formed the metal is always more or less stretched and some edges get wider than others so that it makes it difficult to attach the cap strip.

These cap strips give considerable trouble if the edges are not properly bent or lay up too closely, and so some foresight must be used in preparing them as well as opening them up after being in place.

The method of making the seams for the elbows is commonly down, as detail "C" shows, although the double seam is preferable where considerable vibration is met with, it being stronger than the hammered lock. Workmen not acquainted with such work would do well to experiment with scrap metal in making such problems and also in making the joints especially. It is a simple thing to make them after a person has experimented at several odd jobs, because then many vague and hazy points are cleared away.

TIME SAVED in Placing Machines and Stock CORRECTLY In Shop

*Duplicate Tools Strategically Placed Will
Also Save Worker's Time and Energy*

By FRANK HARRISON

ACCOMPANYING is a rough pencil sketch of a tentative shop layout per your request on page 25 of February 4th issue. It was prepared hurriedly and is submitted merely for what it may be worth, because sheet metal work differs enough in localities not fifty miles apart to warrant different arrangements of duplicate equipment. Secondly, I do not know what equipment he has or proposes to have, and, thirdly, he is best of all capable of arranging what he wants if he attacks his problem properly. Several years ago when I was confronted with the same problem I attacked it in the following manner:

First, I made an accurate plan to a scale ($\frac{1}{4}$ in.), as he has done. Then to the same scale ($\frac{1}{4}$ in.) I marked out on another paper (he might use light cardboard) the floor spaces which our various equipment that we had or contemplated getting would occupy, such as brake, square shear, rolls, bar folder, mandrel stake; also I marked out stretchout bench, layout bench, stake bench; also stake rack, stand machine rack; also all stock racks, fitting bins, and an undersized marker to indicate an assembling space on the floor reserved for large work such as a skylight. I wrote the names and dimensions on each piece and then cut them apart and superimposed them upon my plan according to my best judgment.

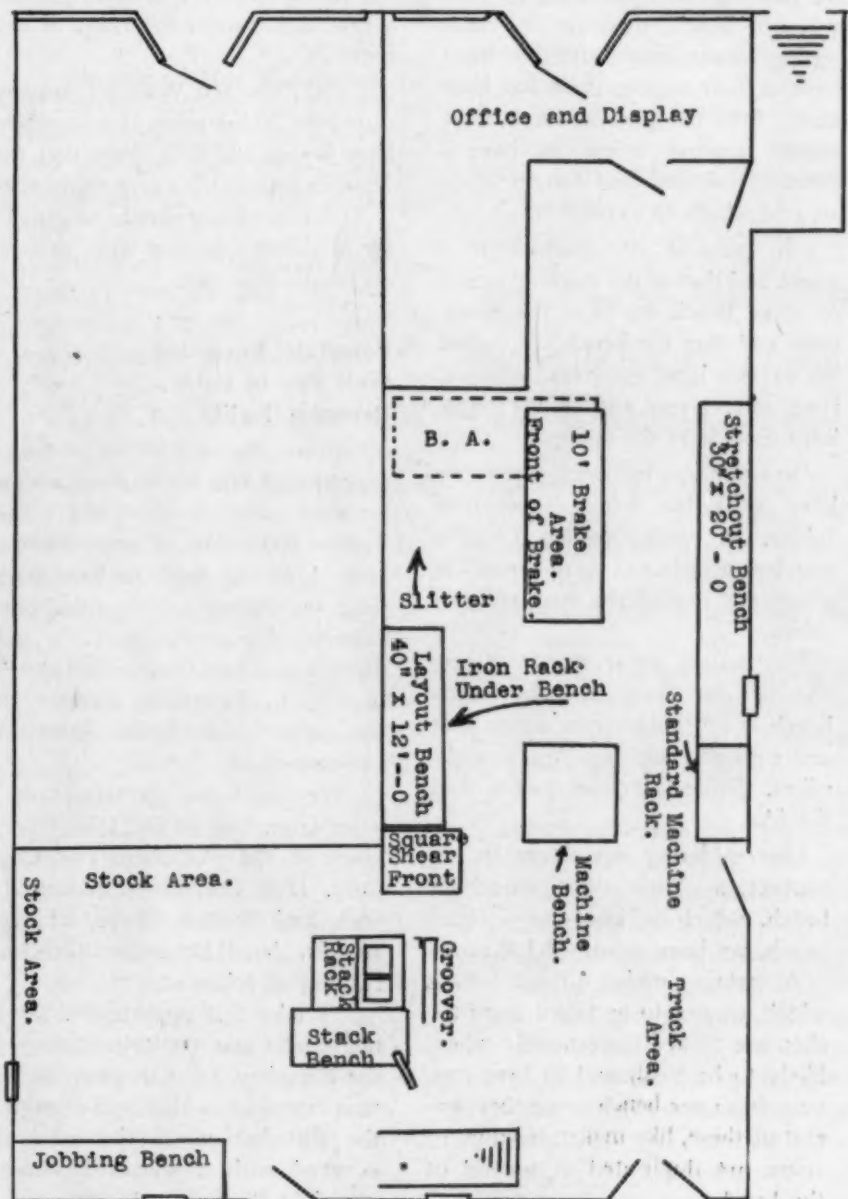
Next, in my imagination, I unloaded some sheets of iron, a couple boxes of tin, conductor elbows and the like and proceeded to get out some imaginary jobs. For instance, a bundle of iron went first to the iron rack, thence to the slit, thence to the layout bench, thence to the brake and finally to the stretchout bench for a mould gutter job. Or it went successively to square

shear, folder, rolls, groover, mandrel (for a rivet), beader and crimper for cold air pipe.

I took through many typical jobs, starting with the work likely to be most prevalent in our shop, having in mind a most direct and continuous passage of the products through

their various operations, with few or no skips between machines that would involve unnecessary handling.

After one or another of these imaginary jobs I found it desirable to change the location of some equipment. I found, too, that the best arrangement for one job would



Sheet Metal Shop Layout as Suggested by Frank Harrison. Much Time and Energy Can Be Saved by Proper Attention to Machinery Placement in the Shop

not be the best for another job, in which case I favored the job where-in we could save the most time in the long run. Eventually I arrived at what I considered about the ideal arrangement.

I then carefully surveyed the whole layout to see that I had ample floor space between equipment, after which I traced the superimposed equipment on the floor plan and set about to give it material form.

Needless to say, this plan was not developed in a few minutes nor even hours. A day or more was given over to it in concentrated study. But it was worth it. To date we have not felt the need to shift a single bench, machine or stake setting. Some little shifting of hand tools in their various racks has been made, but the general layout we cannot improve unless we have a different shaped and larger floor area in which to expand it.

For purpose of comparison I might add that at the mandrel bench or stake bench we have the bench plate and over the bench are racked the various hand groovers, punches, rivet sets, rivets and things regularly used with the stakes.

On another, a revolving bench, we have rolls, bar folder, sheet iron folder, an extra opening for the mandrel attachment and room to attach any one of the standard machines.

Our square shear stands at one end of our layout bench, which bench is accessible from either side and equipped with squares, straight edges, dividers, trammel points and the like.

Our soldering equipment is in connection with the stretchout bench, which is also our jobbing bench, we being cramped for room.

A certain number of hand tools which are not to be taken from the shop are racked conveniently where likely to be used, and to save running from one bench to another several of these, like mallet, hammer or snips, are duplicated at several of the benches.

In the sketch I have submitted I should have made the office deeper if the side door indicated had been

further back. The purpose of this door is not clearly indicated. The office recess into the shop along the middle wall is merely suggestive for the display of one or two mounted furnaces. The light provided is very inadequate unless it is provided through skylights. In this connection I suggest that you do not arrange equipment favorable to light, but provide additional light, if need be, favorable to equipment.

My sketch assumes a rotary slitter on the end of the layout bench. If a different sort is to be used, it might be better to place brake as indicated by dotted lines and shift the layout bench and square shear a few feet toward the front of the room.

Peck, Stow and Wilcox Company distribute a blue print of a standard shop layout and it is likely that the Niagara people have something also.

This contributor would be glad to see a sketch of how this shop is eventually laid out.

Porcelain Enamelled Wall Tile in Color Becomes Reality

"At last the idea of the porcelain enamel wall tile for bathrooms and kitchens which the Sheet Steel Trade Extension Committee has been fostering and promoting in their advertising copy and magazine publicity for a period of the past three years has become a reality," says C. L. Patterson, secretary of the Sheet Steel Trade Extension Committee.

"We are today in receipt of a letter from George D. Haines, president of the Porcelain Tile Company, 1736 Builders' Building, La Salle and Wacker Drive, Chicago, Illinois, dated December 17th, and reading as follows:

"I take this opportunity to announce to you the organization of the Porcelain Tile Company, an Illinois corporation that will engage in the distribution of the steel tile covered with a standard vitreous porcelain steel enamel.

"I am enclosing forwarding an advertising folder which illustrates in such a manner the product we

are handling, as cannot be described in a letter. We feel that there is a big market for a material of this kind, especially in view of the fact that the tile is self-locating and does not require the services of a skilled tile layer.

"This is very significant in view of the fact that the new market for clay tile industry is confined at present to about 125 or 130 cities where these skilled tile layers are available. The "Porstelain" system of standard wall tiling will give about 75 per cent of the country the tile that it has needed.

"I shall appreciate your listing this product, together with the name of the Porcelain Tile Company, under the list of manufacturers. If there is anything further that I can tell you regarding this product that might be of interest to you, I shall be very pleased to do so."

"We are mailing out copies of the American Institute of Architects File No. 23-F, which describes in detail this wall tile fabricated from sheet steel, and which we believe will develop into an enormous industry consuming thousands of tons of our product annually. We believe that the perfecting of this particular tile is but the forerunner of other forms which will be developed by other fabricators."

The Architects File No. 23-F contains a complete description of the material, together with some excellent illustrations showing its application. A copy will be sent to you on request.

Thatcher Company Newark, New Jersey, Insures Employees

The Thatcher Company, Newark, N. J., manufacturer ranges and furnaces, has provided its employees with more than \$625,000 worth of group life insurance, it has been announced by the Metropolitan Life Insurance Company, New York. Approximately \$500,000 worth of accidental death and dismemberment insurance, combined with health and non-occupational accident benefits, supplements the life insurance protection.

Random Notes and Sketches

By Sidney Arnold

"The essence of humor is sensibility; warm, tender fellow-feeling with all forms of existence."—Caryl Chess.

James Charles Allen, the well-known International Heater representative at Rockford, Illinois, happened into the shop of Art Woodruff, Woodruff & Busack, Pecatonica, Illinois, where he learned of a good joke on Art that cost the latter 25 cents.

Mr. Woodruff is a very enthusiastic warm air heating man. He realizes that any job must have the three elements—namely, heat, circulation and humidity—to function properly. The other day Art had his car washed and immediately thereafter proposed a trip to Rockford to Mrs. Woodruff to see a show. After the show was over Mr. Woodruff found that the key to his car would not work. A little colored boy stepped up and said, "Say, mister! I can unlock your car for a quarter." Art gave him the keys. Whereupon the youngster blew lustily into the keyhole, inserted the key and open came the door. On the way home Art kept saying, "That proves it." Finally Mrs. Woodruff asked him what it proves. And he replied that to get good results you must have heat, circulation and humidity, and that colored youngster sure had them all. Mrs. Woodruff said that all through the night Art kept talking in his sleep saying, "That's it. It always works."

* * *

I had the pleasure of a visit from George Steck of the Central Alloy Steel Corporation on Wednesday of this week. Mr. Steck has an enormous fund of scientific knowledge of steel, its properties and the processes of manufacture and refinement at his command. His exposition of these processes is exceedingly convincing, because he has that happy faculty of interpreting technical subjects into the every-day language of the layman. That is indeed an accomplishment that educates. It sells goods, because it places the layman in a posi-

tion to judge for himself the difference between materials having true merit and those which have none.

* * *

Mrs. Ralph Patten (Sycamore)—"Junior, who taught you to use those dreadful words?"

"Santa Claus, Mama."

"Santa Claus?"

Junior—"Yes, Mama; when he fell over a chair in my room on Christmas eve."

* * *

Shrunk in Her Estimation

Harry Van Bays, American Furnace Company, St. Louis: "Why did you get me such big shirts? These are four sizes too large for me."

His Wife: "They cost just the same as your size and I wasn't going to let a strange clerk know I married such a little shrimp as you."

* * *

Conversation had lagged. Both Harry Pyle of the Englewood Sheet Metal Works, Chicago, and the girl were desperate. He took another plunge: "Uh—you are interested in sports?"

"Oh, yes," she enthused, "I'm just dying to see whether Tilden will beat Dempsey."

Harry gritted his teeth. "And who do you think will win?"

"Oh, Tilden," she answered, "by a touchdown."

Harry passed out.

* * *

Men Only

"Hello, Perkins, where did you get the black eye?"

"Oh, it was only a sweethearts' quarrel."

"Sweethearts' quarrel? Why, your girl didn't give you that, did she?"

"Oh, no, it was her other sweetheart."

* * *

Rudy Guenther, Accurate Sheet Metal Works, Chicago: "Well, did you read the letter I sent you?"

Office boy: "Yes, sir; I read it inside and outside. On the inside it said, 'You are fired,' and on the outside it said, 'Return in five days,' so here I am."

* * *

The Sucker's Lament

I had read all my life of honest men
Who had lost their savings with one
stroke of the pen,
Because they believed the get-rich-
quick plan
Of some scheming, mealy-mouthed
swindling man.
And I pitied them not, but thought
in my mind,
Why didn't the poor boobs know
what they signed?

And then one day I answered the
door,
And listened for fifteen minutes or
more
While a slick-tongued shyster, with
language fine,
Induced me to sign on the dotted
line.
He took my ten bucks and left,
and I
Felt assured that if ever I came to
die—
I need not pass out with a grain of
fear
That my son and heir in his grow-
ing years
Would suffer for lack of the things
of life,
For the insurance I had would keep
him and my wife.
So I petted myself with smug de-
light;
I was happy to know I had done
what was right.

'Twas the same old song, for now I
find
The insurance certificate for which
I signed
Was worth no more, though my ten
was gone,
Than the yellow paper it was
printed on.
And I, I've found, at the very best,
Am just a sucker the same as the
rest.

MORAL

Though you think you're wise, it's
a pretty safe bet
There's a shark somewhere that'll
get you yet.

Ordinance at the Council's next meeting, so that a complete report on them will be made by the committee having charge of that work at the next meeting of the association, which will be Monday evening, February 27, 1928, in the Sherman Hotel.

There are several other matters of primary importance coming up at that meeting and it, therefore, behooves everyone wishing to get in on them to signify their intentions to join the association before that time. This can be done by communicating with Secretary Fred Goodall, G. & S. Stove & Furnace Company, 4224 West North Avenue, Chicago, whose telephone number is Albany 7891.

At the meeting held last Monday evening President Burt also presented the association with an inspection form which can be used to facilitate the work of taking out permits. This form, reproduced herewith, is 8½ by 11 inches in the original. It is filled out by the installer and sent to the Building Commissioner's office in the City Hall, accompanied by the permit fee established by the ordinance. Here it is checked for accuracy and the permit is issued or not, as the facts in the case determine. If the permit is allowed, the form is then turned over to the inspector in whose district the house to be heated is located, who takes it out with him when he checks for accuracy on the job.

After the inspector has completed his work and the job is found to be in accordance with the requirements of the ordinance, the form is sent back to the Building Commissioner's office where it is filed. The form is made out in duplicate by the furnace installer, he keeping the duplicate form for his own reference. Attention is here called to the column on the extreme left side of the sheet. Here space has been allowed for the installer to complete the record of the job by inserting the prices on his duplicate form for his own future reference. On the reverse side of the form provision is made for instances where it is desired to consider be-

low zero temperatures. These blanks are available from the secretary of the association at \$2.00 per hundred.

Remember that the last chance you will have to get into the association at the present initiation fee will be March 1, 1928. After that date the fee will be \$100. The next meeting of the association will be held in the Sherman Hotel, Monday evening, February 27. Admission will be to members only.

New Members Elected

The new members taken into the organization during the meeting were as follows:

Jefferson Hardware Company, 5213 Lawrence Avenue, Chicago.

James A. Black Hardware Company, 3200 East 92nd Street, Chicago.

Harry A. Ackerman, 4011 West Harrison Street, Chicago.

Adler Sheet Metal Works, 2928 Armitage Avenue, Chicago.

Jemison Furnace Company, 3435 North Cicero Avenue, Chicago.

J. Kefferly Sheet Metal Works, 4320 Armitage Avenue, Chicago.

New Air Moistener Eliminates Use of Ball Float in Tank For Warm Air Furnace Use

A new air moistener has made its appearance on the market for use with the warm air furnace. It is being manufactured by the Simplex Manufacturing Company, 720 South Fourth street, Minneapolis, Minnesota.

The principle feature of this new device is that it has no float, the automatic shut off working on the lever and fulcrum principle. The trough or evaporating pan is suspended from the pipe and near the front of the machine, while at the rear of the trough is a counter weight. When enough water has accumulated in the trough, the weight of the water causes the trough to lower or drop at the rear and raises the front end. This raising of the front end forces a rubber gasket to seat into the drip valve, thereby shutting off the flow of the water.

Then as the accumulated water is evaporated, the counter weight at

the rear of the trough reverses the action bringing the machine back to the open position and the water starts flowing again according to the adjustment. It requires about five pints of water in the trough to shut off its flow, and the machine has a capacity of ten pints before overflowing occurs.

The flow of water into the tank itself is regulated by the valve in the front of the machine.

Complete information can be had from the Simplex Manufacturing Company, 720 South Fourth Street, Minneapolis, Minnesota.

Sam Sorensen Has Solution to Chimney Back Draft Problem

Sam Sorensen, 1336 North Central Avenue, Chicago, has a solution to the chimney down draft problems that appeared in a recent issue of AMERICAN ARTISAN. He writes as follows:

"In answer to your subscriber's request for information concerning a chimney that does not function properly, permit me to say, his difficulty can arise from three or four different conditions.

1. Conflicting currents of air caused by gables on the roof, or trees if high enough may sometimes cause it.

2. The chimney, being placed on the outside of the house, sometimes gets chilled sufficiently to cause a down draft.

3. When the fire in the heating plant is not high enough in temperature to heat the chimney and keep warm this will also cause trouble.

I should recommend a 12-inch cast iron revolving top and if the hood and sail are built correctly, I will guarantee this to overcome the difficulty.

Here are some simple rules to go by when making up a revolving top. Cut a circle for the top 2½ times the diameter of the pipe. Cut the circle of the sail equal to the diameter of the pipe. When forming up the top always see that it comes down below the cast iron collar, because that is what gives you your vacuum and makes the chimney draw.

Michigan Sheet Metal Contractors to Meet in Kalamazoo

The annual convention of the Michigan Sheet Metal and Roofing Contractors' Association will be held in Kalamazoo, March 5, 6, 7 and 8, 1928. The salesmen's Auxiliary to this association will also hold its annual meeting at that time.

The services of Mr. Kelsey of Toledo, Ohio, have been secured as the speaker at the banquet. Those men who attended the mid-year meeting of the National Warm Air Heating and Ventilating Association at Urbana in December need no second invitation to come to the Michigan convention, because they know that with Mr. Kelsey to entertain them at the banquet they are going to be in for a good time.

Hart & Crouse Company Has Special Color Feature on New Furnace

Hart & Crouse Company, Utica, New York, with the opening of the new year, have come forth with a new furnace, including new colors and new features.

The new colors give the Royal a striking, pleasing appearance, and present a beneficial selling advantage for you. The richness of the appearance is fully in keeping with the quality that has always identified the Royal.

The Royal furnace is now available with a sturdy, waist-high shaker and with improved grates for burning coal or wood. The improved grates permit the use of fine grades of coal as well as lignite. Each grate is replaceable quickly and easily—no bolts are used in the grate assembly.

The one piece cast iron radiator is designed for use with the cleanout extending either through the panel front or through the casing. The cleanout neck is wrapped with asbestos rope held firmly in place by two cast iron collars. This gives a permanently gas tight connection, either at the panel front or at the casing.

The streamline design of the cast iron radiator presents the largest

amount of heating surface and moreover surface of maximum effectiveness. The smooth contours of the radiator offer least resistance to the upward travel of warm air—no flat surfaces or flanges cut down the free area. In addition the design of the radiator compels equal temperatured air at all parts of the furnace air chamber.

Complete information can be had by writing the company direct at Utica, New York.

Few Furnace Men at Illinois Retail Hardware Show

Among our friends exhibiting at the Illinois Retail Hardware Show held at the Sherman Hotel, Chicago, February 14 and 15, were the following:

American Steel & Wire Company, Chicago, with wire products. Represented by S. R. Hanna, D. J. O'Conner, R. N. Clover, G. W. Scott, W. W. Taylor and F. Thomson.

Barnes Metal Products Company, with elbows, gutters and a complete line of conductor pipe. Represented by E. T. Barnes, W. J. Ahern, C. G. Seibert.

Brillion Furnace Company, Brillion, Wisconsin, exhibiting their new furnace cleaner and the Brillion furnace. Represented by Fred Bloomfield.

Excelsior Steel Furnace Company, Chicago, with the new Everwear elbow and double wall pipe. Represented by Charles Glessner, W. J. Prendergast and Joe Goldberg.

Fox Furnace Company, Elyria, Ohio, with the Sunbeam cabinet heater in two sizes and finishes, the new 1000 Series and the new Delux Sunbeam. Represented by E. A. Grange, M. Klett, E. M. Weideman.

Hero Furnace Company, Sycamore, Illinois, with a new auxiliary electric heater and their 600 series furnaces. Represented by H. E. Clutterham, R. S. Patten, I. E. Hardy.

International Heater Company, Chicago, with their Economy blue

front furnace. Represented by J. M. Beech, F. L. Fraser, T. Ried Mackin, Maurice J. Mackin.

Milwaukee Corrugating Company, Milwaukee, with gutters, downspouts, conductor pipe, etc. Represented by W. F. Waller, Lester R. Wise, Bill Peterson, E. G. Holly, H. A. Parkin, J. H. Parkay, Fred Naylor, A. P. Halm.

Wheeling Corrugating Company, Wheeling, West Virginia, with sheet metal products. Represented by R. H. Nixon, N. B. Faber, N. J. Olsen, A. E. Ketcham.

Moncrief Furnace Company, Atlanta, Ga., Has Interesting Heating Booklet

Especial attention is directed to a little publication that has recently made its appearance, entitled *Year 'Round Comfort*. It comes from the Moncrief Furnace Company, Atlanta, Georgia, and describes the use of the Roto-Blast furnace in connection with the heating of churches, industrial plants, garages, schools, public buildings and the gymnasium.

Illustrated in the booklet is a complete installation that was made in the Atlantic Coast Line Railroad shops, South Rocky Mount, North Carolina, showing how the air was forced through a long series of ducts running through the work shop, discharging the air at convenient points along the way.

Another illustration is that of the warm air heating arrangement of Woodruff Hall, University of Georgia, Gymnasium, Athens, Georgia.

To the warm air furnace installer who is interested in the bigger warm air heating jobs this little booklet holds a special interest and inspiration. A copy will be mailed to you upon request made to the Moncrief Furnace Company.

Furnace and Sheet Metal Exhibitors at Iowa Hardware Show

Cole Manufacturing Company, Chicago. Cole's Hot Blast gas stoves, ranges, circulators, furnaces, heaters and chick brooders. W. L.



"It pays us to use heavier gauge steel"

"You know, when I first heard all this talk about 'adequate mass' I wondered if it wasn't, mebbe, just talk. But the more I looked into it and the more I thought about it, the more I became convinced that it is one of the biggest things for the sheet metal industry to think about. Sellin' material that is heavy enough to actually do itself justice is still hard work. But it ain't as hard as it used to be. And from our standpoint it means a good deal. In the first place, it is more profitable from a dollars and cents standpoint; and in the second place—what's more im-

portant—it very often makes the difference between a satisfied and a dissatisfied customer. Many a customer has thanked me later for gettin' him to take heavier gauge material against his judgment at the time.

"Then, too, heavier gauges carry heavier coatings."

* * *

Technical counsel is available regarding the adequate application of Sheet Steel, on request to the SHEET STEEL TRADE EXTENSION COMMITTEE, OLIVER BUILDING, PITTSBURGH, PENNA.



This trade-mark stenciled on galvanized Sheet Steel is definite insurance to the buyer that every sheet so branded is of prime quality—full weight for the gauge stamped on the sheet—never less than 28 gauge—and that the galvanizing is of the full weight and quality established by the SHEET STEEL TRADE EXTENSION COMMITTEE specification.

SHEET STEEL

for Strength Safety Beauty and Economy

May you saw it in AMERICAN ARTISAN—Thank you!

McClaskey, General Sales Manager, A. J. Allen and Joe Thomas.

Des Moines Stove Repair Company, Des Moines, Iowa. Furnace and boiler repairs. J. B. Green, S. C. Green, H. B. Weaver and A. H. Erickson.

Fox Furnace Company, Elyria, Ohio. New Sunbeam Cabinet heater with improvements, also new "1000 Series" Sunbeam furnace. E. F. Fyler.

Hayes-Custer Stove and Furnace Company, Bloomington, Illinois. Normal porcelain ranges Normal circulators. V. F. Houlihan, Louis A. Hayes, Sales Manager.

Liberty Foundry Company, St. Louis, Missouri. Furnaces. L. P. Phillips.

Moore Brothers Company, Joliet, Illinois. Verdure and Golden Glo ranges, number seventeen heaters. Ed Marsh, Louis Moore, Jr.

Milwaukee Corrugating Company, Milwaukee, Wisconsin. New Spanish fixtures and lock joint metal ceiling, fireproof line, laths, corner beads, warm air furnace equipment, stovepipe elbows, eaves trough and other Milcor products. P. E. Sauerwein, J. R. Morganson.

Quick Meal Stove Company, St. Louis, Missouri. Coal, gas and gasoline ranges and oil stoves. J. J. Troxell.

Phillip Bernard Company, Sioux City, Iowa. Farm, live stock and poultry equipment. S. Harper.

Richards-Wilcox Manufacturing Company, Aurora, Illinois. Sliding door hardware, conveying equipment, industrial and fire doors. Lloyd D. Starks, G. J. Barber and A. C. Perkins.

U. S. Register Company of Iowa, Marshalltown, Iowa, with Jones national registers and U. S. wood faces. Represented by L. B. Kingsbury.

Lennox Furnace Company, Marshalltown, Iowa, with their largest and smallest sized furnaces, Torrid Zone furnace with oil conservator radiator, standard Torrid Zone and Equator furnaces. Represented by R. T. Wasson, Vice President and Sales Manager, F. J. Kiesel, H. H. Spohr, E. W. Hunter, C. N. Tulk.

National Horizontal Furnace Research Body Holds Meeting

The Eighth Annual Convention of the National Horizontal Furnace and Research Association was held at the plant of the P. H. MaGirl Foundry & Furnace Works, Bloomington, Illinois, February 6th, 7th and 8th.

This organization is composed of the distributors of the National Horizontal Super-Heaters, manufactured by the MaGirl Company.

The convention was well attended by members from all parts of the country, who report a very favorable outlook for the fan blast heating business this year.

The meeting was called to order by John A. White, President National Heating and Ventilating Company, Indianapolis, and the following officers were elected for the ensuing year: President, W. B. Hickerson, President of the W. B. Hickerson Heating Company, Denver, Colorado; Vice President, Eric D. Lane, Secretary of the Stanton Heater Company, Martins Ferry, Ohio; Secretary, G. A. Helwig, President National Heating & Ventilating Company, St. Louis, Missouri.

The first two days' sessions were confined to discussions and talks on the most modern methods of warm air heating and ventilating. The requirements of all sections of the country were discussed by representatives in attendance from their respective territories. On the following day Dr. E. Vernon Hill, of Chicago, addressed the Association on the subject of "Air Conditioning," a topic of intense interest. R. J. Stewart, Sales Manager of the Johns-Manville Company, made an address on salesmanship, and talks were also made by H. E. Carlson of the American Blower Company and Henry Mathis, President of the New York Blower Company.

Mid-day luncheons were served each day at the factory and the convention was closed Wednesday evening with a banquet at the Hotel Illinois. W. B. Hickerson of Denver presided, and the guests were

pleasantly entertained throughout the evening.

Furnace Makers Exhibit at Sycamore, Illinois, Winter Fair

Sycamore, Illinois, is one of the few cities to have the distinction of holding a winter fair, and this fair was in full progress in that city last week, according to W. V. Devereux, 207 South Maple Street, Sycamore, Illinois.

Furnace manufacturers and oil burner concerns are beginning to realize that this show is an excellent place to advertise their wares. The Meyer Furnace Company, with a Weir furnace, and the Silent automatic oil burner were represented by C. E. Walters, DeKalb, Illinois. The Standard Foundry & Manufacturing Company, with a Titan furnace, and Oil-O-Matic oil burner, were represented by Joy Love, Sycamore. The Hero Furnace Company, with a Hero, were represented by E. E. Fatterbill, while the Floral City Heater Company was represented by W. V. Devereaux, Sycamore and DeKalb.

The attendance at this fair averaged about 2,000 a day. It ran five days and attracted farmers and urban dwellers from a radius of fifty miles.



Minnesota Retail Hardware Association, New Municipal Auditorium, Minneapolis, February 21-24. C. H. Casey, manager, Nicollet at 24th Street, Minneapolis.

Ohio Hardware Association will hold its 1928 convention and exhibit at Toledo, February 21-24. James B. Carson, secretary, 411 Mutual Home Building, Dayton.

South Dakota Retail Hardware Association, Coliseum Building, in Sioux Falls, February 27, 28, 29, 1928. Charles H. Casey, Secretary, Nicollet at 24th Streets, Minneapolis.

Michigan Sheet Metal & Roofing Contractors' Association, Kalamazoo, Michigan, March 5, 6, 7, 8, 1928. Secretary, Frank E. Ederle, 1121 Franklin Street, Grand Rapids, Michigan.

Iowa Sheet Metal Contractors' Association short course to be held at the university at Ames, Iowa, March 14, 15 and 16, 1928.



INLAND Can Help Increase Your Sheet Steel Business

People are beginning to realize the value of sheet steel products.

Their beauty, strength, safety and economy have never been questioned but these facts have now been brought clearly to the attention of the public.

You can take advantage of this splendid educational work which is being done by the Sheet Steel Trade Extension Committee, Pittsburgh, Pa., and you will make no mistake by using

INLAND OPEN HEARTH SHEET STEEL

Producers of Blue Annealed, Box Annealed, Galvanized and Roofing Sheets for twenty-six years, controlling its manufacturing operations from ore to finished product, this Company can be relied upon to furnish you with material properly prepared for each special usage.

With sheet mills at Indiana Harbor, Indiana, and Milwaukee, Wisconsin, INLAND is especially in a position to render prompt and efficient service to the sheet steel buyers of the Middle West.

INLAND STEEL COMPANY

38 South Dearborn Street
CHICAGO

Branch Offices and Representatives

St. Louis Milwaukee St. Paul Kansas City New Orleans
El Paso Salt Lake City

Sheets • Rivets • Bars • Plates • Shapes • Rails • Track Accessories

Life Insurance for Sheet Steel

Insure longer life for the sheet steel you purchase! Demand protection against corrosion and rust.

Specify

Inland Copper Alloy Steel

Sheets to this specification last three to five times longer.
They are durable!

Contributing Member
SHEET STEEL
TRADE EXTENSION COMMITTEE



Specifications for Finished Steel Indicate no Abatement of Consumption—Production Moving Upwards

Pig Iron Market Is Active—Buying and Demand for Nonferrous Metal Light

CONSUMERS of finished steel are specifying against first quarter contracts at a rate indicating no abatement of consumption, but fresh buying lags as the necessity for supplemental purchases has not arisen and producers are not yet soliciting second quarter business.

Production meanwhile is slowly working up. Eastern Pennsylvania mills have eased off in some heavy products, but the Pittsburgh district approaches an 85 per cent ingot rate, Chicago holds at about 93 per cent and the Mahoning Valley, unsteady recently, has made important gains this week. Steel production generally approximates the high rate of late January and thus far appears to have topped last February slightly.

All changes in steel prices continue to be advances. Hot strip levels have been marked up \$2 per ton for the second quarter. Sheet-makers have reaffirmed for the next quarter the levels they originally announced for this quarter, but have since shaded up to \$5 per ton. The small business booked recently in bars, plates and shapes has been on the basis of 1.85 cents Pittsburgh, or \$1 per ton over current contracts. If makers again advance, as planned, it will attest their confidence in the market.

Pig Iron

At Pittsburgh practically the only inquiry of importance for pig iron is that just issued by one concern for an undetermined tonnage of No. 2 plain, No. 2X and No. 3. Several transactions are negotiated quietly each week, some on a reciprocity basis. While one or two furnaces have adopted \$17.50, valley, as their asking price for No. 2 plain and malleable, others are quoting \$17.25, which still represents the market. Another concern is understood to have closed for 5,000 tons of basic with a nearby steel interest, which

has quoted \$17, furnace, or \$18.13, delivered, against \$18.76, delivered from valley stacks.

Small requirements for Bessemer iron are filled by valley merchant stacks at \$17.50, valley. One valley steel works sold a few small lots to a nearby destination at \$18, valley.

Numerous quiet inquiries are appearing at Chicago for second quarter pig iron. Shipments are making important increases over January.

Active spot buying continues for first quarter, and several additional important tonnages have been closed for next quarter. Stocks of iron in furnace yards are adequate. No change in operations is contemplated soon. Five of the ten merchant stacks in the district are active, two Federal, two Iroquois, and the Zenith furnace at Duluth.

The base price of \$18.50, Chicago furnace, is steady for spot and contract business. A few small sales were made recently at slightly less. Silvery business is light. Some sales of charcoal iron are reported in this district at \$24, furnace.

Pig iron buying at Birmingham is limited to small lots. No selling is noted for second quarter. The price still is \$16, base, Birmingham. Ten blast furnaces are on foundry, six on basic and one on special iron.

Copper

Most copper producers have quoted 14.12½ cents, Connecticut, but a little metal has been available about five points lower. The concession, however, has not brought out much business, as users apparently are well covered for the time being. Export buying has been light this past week. January statistics show total stocks declined.

Lead

The price of lead has been cut 15 points on New York basis to 6.35 cents, while the East St. Louis price has gone down a little more gradually. As it has been on the down

trend a little longer, however, the differential is slightly wider than it was a while back. The latter price is 6.10 cents to 6.15 cents.

A fair amount of business has been done for prompt shipment. The price situation here has been easy on account of weakness abroad.

Tin

The price of tin has continued to fall. Last mid-week, when the price fell to 52.75 cents, or about one cent less than at the opening of the week, users rushed to cover in one of the biggest buying days ever recorded, on positions from prompt to June. The price recovered one-half cent in a few hours, but the following day, with not much business, the price began to sink again and by noon Saturday the market was a little below 52.00 cents. This was the lowest in nearly three years.

Zinc

New business in prime western zinc continues light. Recent business was done mostly at about 5.62½ cents, East St. Louis. The January statistics showed stocks increased 1,412 tons. Output and shipments showed little change from December.

Solder

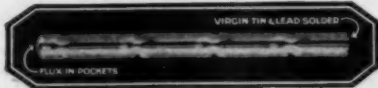
Chicago warehouse prices on solder are as follows: Warranted 50-50, \$35.00; Commercial 45-55, \$32.00; plumbers', \$29.00; all per 100 pounds.

Old Metals

Wholesale quotations in the Chicago district, which should be considered as nominal, are as follows: Old steel axles, \$15.50 to \$16.00; old iron axles, \$21.00 to \$21.50; steel springs, \$14.75 to \$15.25; No. 1 wrought iron, \$11.00 to \$11.50; No. 1 cast, \$12.75 to \$13.25, all per net tons. Prices for non-ferrous metals are quoted as follows, per pound: Light copper, 9 cents; zinc, 3½ cents; cast aluminum, 13¼ cents.

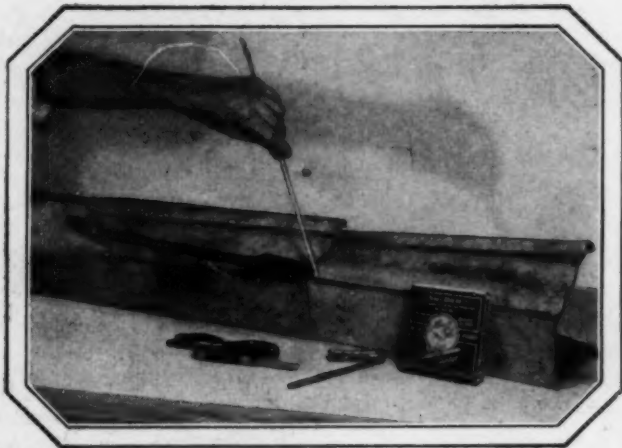
KESTER SOLDER

Self-Fluxing



(Underwriters' Laboratories Inspected)

"Requires Only Heat"



For Dirty Work

PARTS to be soldered *should* be clean—yes, but how often are they? In outdoor sheet-metal work dirty jobs are often met. Usually this work must stand up well and it is vital to have a well soldered joint.

On a job like that, Kester is in its glory. Just apply heat and see how the scientific flux flows out, just before the solder melts. An ideal combination—this scientific flux, and bright virgin tin and lead solder. The only result can be neat and substantial work. And at that, in a fraction of the time consumed by using common solder.



Kester Acid-Core Solder for general use in 1 lb. cartons; 1, 5 and 10 lb. spools. Small package Acid-Core Solder, Kester Metal Mender for autoist, householder, etc. For delicate radio and electrical work—Kester Rosin-Core Solder.

Manufactured by the
CHICAGO SOLDER COMPANY
4243 Wrightwood Ave.
CHICAGO, U. S. A.

Round
Corrugated



Plain Round



NEVER MADE WITHOUT THIS

TRADE *F. Dieckmann* MARK

Quality and Service Made 'em Famous

Made of one piece of heavy gauge material, in all styles and angles from 10 to 90 degrees, of 24, 26, 28 ga. ternes, then galvanized after formation.

DIECKMANN Elbows and Shoes

*are the standard of the market
and always give satisfaction*

Send for new catalogue 26 showing complete line
The Ferdinand Dieckmann Co.
P. O. Station B, Cincinnati, O.

Square
Corrugated
Style A



Square
Corrugated
Style B



Not made lighter than
28 ga. or 16 oz. copper

Chicago Warehouse Metal and Furnace Supply Prices

AMERICAN ARTISAN is the only publication containing Western Metal, Furnace Supply and Hardware prices corrected weekly

METALS

PIG IRON

Chicago Fdy.,	
No. 2	\$13 50
Southern Fdy. No. 2	22 01
Lake Superior Charcoal	27 04
Malleable	18 50

FIRST QUALITY BRIGHT TIN PLATES

IC	20x28 112 sheets	\$25 10
IX	20x28	29 60
IXX	20x28 56 sheets	16 20
IXXX	20x28	17 55
IXXXX	20x28	18 95

TERNE PLATES

	Per Box
IC 20x28, 40-lb. 112 sheets	\$25 00
IX 20x28, 40-lb. 112 sheets	27 75
IC 20x28, 25-lb. 112 sheets	21 15
IX 20x28, 25-lb. 112 sheets	23 80
IC 20x28, 20-lb. 112 sheets	19 55
IX 20x28, 20-lb. 112 sheets	22 05
IC 20x28, 15-lb. 112 sheets	18 05

"ARMCO" INGOT IRON PLATES

No. 8 ga. up to and including	
1/4 in.—100 lbs.	\$4 55

COKE PLATES

Cokes, 80 lbs., base, 20x28	\$13 60
Cokes, 90 lbs., base, 20x28	13 80
Cokes, 100 lbs., base, 20x28	14 00
Cokes, 107 lbs., base, IC	
20x28	14 30
Cokes, 135 lbs., base, IX	
20x28	16 40
Cokes, 155 lbs., base, 56	
sheets	9 20
Cokes, 175 lbs., base, 56	
sheets	10 05
Cokes, 195 lbs., base, 56	
sheets	10 90

BLUE ANNEALED SHEETS

Base 10 ga.	per 100 lbs. \$3 50
"Armco" 10 ga.	per 100 lbs. 4 00

ONE PASS COLD ROLLED

BLACK	
No. 18-20	per 100 lbs. \$3 75
No. 22	per 100 lbs. 3 90
No. 24	per 100 lbs. 3 95
No. 26	per 100 lbs. 4 05
No. 27	per 100 lbs. 4 10
No. 28	per 100 lbs. 4 20
No. 29	per 100 lbs. 4 25
No. 30	per 100 lbs. 4 45

"ARMCO" GALVANIZED

"Armco" 24	per 100 lbs. \$6 15
------------	---------------------

GALVANIZED

No. 16	per 100 lbs. \$4 20
No. 18	per 100 lbs. 4 45
No. 20	per 100 lbs. 4 60
No. 22	per 100 lbs. 4 65
No. 24	per 100 lbs. 4 80
No. 26	per 100 lbs. 5 05
No. 27	per 100 lbs. 5 15
No. 28	per 100 lbs. 5 30
No. 30	per 100 lbs. 5 70

BAR SOLDER

Warranted	
50-50	per 100 lbs. \$35 00

Commercial	
45-55	per 100 lbs. 32 00
Plumbers	per 100 lbs. 29 00

ZINC

In Slabs	\$ 8 50
----------	---------

SHEET ZINC

Cash Lots (600 lbs.)	\$12 00
Sheet Lots	13 00

BRASS

Sheets, Chicago base	17 1/2 c
Mill base	18 c
Tubing, brazed base	26 1/2 c
Wire, base	18 1/2 c
Rods, base	15 1/2 c

COPPER

Sheets, Chicago base	22 1/2 c
Mill base	21 1/2 c
Tubing, seamless base	25 1/2 c
Wire, No. 9, B & S Ga.	18 1/2 c
Wire, No. 10, B & S Ga.	19 c
Wire, No. 11, B & S Ga.	19 1/2 c
Wire, No. 3, B & S Ga. and heavier	18 1/2 c

LEAD

American Pig	\$7 30
Bar	8 30

TIN

Pig Tin	per 100 lbs. \$62 00
Bar Tin	per 100 lbs. 63 00

HARDWARE, SHEET METAL SUPPLIES, WARM AIR FURNACE FITTINGS AND ACCESSORIES.

ASBESTOS	
Paper up to 1/16	.6c per lb.
Roll board	.6 1/2 c per lb.
Mill board 3/32 to 1/2	.6c per lb.
Corrugated Paper (250 sq. ft. to roll)	\$6 00 per roll

BRUSHES

Hot Air Pipe Cleaning	
Bristle, with handle, each	\$0 85

Flue Cleaning

Steel only, each	1 25
------------------	------

BURRS

Copper Burrs only	40-55%
-------------------	--------

CEMENT, FURNACE

American Seal, 5-lb. cans, net	\$ 40
American Seal, 10-lb. cans, net	80
American Seal, 25-lb. cans, net	2 00
Pecora	per 100 lbs. 7 51

CHIMNEY TOPS

Adams' Revolving	
Wt. Doz.	Price Doz.
4 in.	21 lbs. \$11 00
6 in.	24 lbs. 11 50
7 in.	30 lbs. 13 50
8 in.	33 lbs. 15 00
9 in.	51 lbs. 16 50
10 in.	56 lbs. 18 00
12 in.	66 lbs. 22 00
14 in.	110 lbs. 36 00

CLINKER TONGS

Front Rank, each	\$0 75
Per doz.	8 40

CLIPS

Damper	
Adams No-Rivet Steel, with	
tail pieces, per gross	\$9 00
Tail pieces, per gross	2 50

COPPERS—Soldering

Pointed Roofing	
3 lb. and heavier	per lb. 40c
2 1/2 lb.	per lb. 45c
2 lb.	per lb. 48c
1 1/2 lb.	per lb. 55c
1 lb.	per lb. 60c

CORNICE BRAKES

Chicago Steel Bending	
Nos. 1 to 6B	Net

CUT-OFFS

Gal., plain, round or cor. rd.	
26 gauge	30%
28 gauge	35%

DAMPERS

"Yankee" Hot Air	
7 inch, each 20c, doz.	\$1 60
8 inch, each 25c, doz.	2 20
9 inch, each 30c, doz.	2 60
10 inch, each 32c, doz.	2 80

Smoke Pipe	
7 inch, doz.	\$1 60
8 inch, doz.	2 20
9 inch, doz.	3 00
10 inch, doz.	3 75
12 inch, doz.	4 50

ADAMS No. 1 CHECK

Check and Collar Complete	
8 inch, each	2 00
9 inch, each	2 25
End Check Only	
8 inch, each	1 60
9 inch, each	1 85
Collar Only	
8 inch, each	50
9 inch, each	65

No. 2 CHECK

8 inch, each	1 00
9 inch, each	1 00

10% Disc. on Adams No. 1

Diamond Smoke Pipe	
7 inch, doz.	\$ 2 00
8 inch, doz.	3 20
9 inch, doz.	4 80
10 inch, doz.	6 00

Adams' Sheet Metal

7 inch, doz.	\$ 1 60
8 inch, doz.	2 20
9 inch, doz.	3 60
10 inch, doz.	3 80
12 inch, doz.	5 50
14 inch, doz.	5 00

DIGGERS

Post Hole	
Iwan's Split Handle	
(Eureka)	
4-ft. Handle	per doz. \$14 00
7-ft. Handle	per doz. 36 00
Iwan's Hercules pattern,	
per doz.	14 90

EAVES TROUGH

Galv. Crimpedge, crated 75 & 5%	
Zinc, "Barnes"	60%

ELBOWS

Conductor Pipe	
Galv. plain or corrugated,	
round flat Crimp.	
28 Gauge	60%
26 Gauge	45%
24 Gauge	15%

Galv. & Terne Steel

Plain Rd. and Rd. Corr.	
28 Ga.	60%
26 Ga.	45%
24 Ga.	15%

Square Corrugated

No. 28 Gauge	50%
26 Gauge	35%

Portico Elbows

Standard Gauge Conductor Pipe,	
plain or corrugated.	
Not nested	70 & 5%
Nested Solid	70 & 5%

Sq. Corr., A. & B. & Octagon

28 Ga.	50%
26 Ga.	35%

Portico

1", 1 1/4", 1 1/2"	45%
--------------------	-----

Copper

16 oz., all designs	50%
---------------------	-----

Zinc

All styles	60%
------------	-----

ELBOWS—Stove Pipe

1-piece Corrugated, Uniform Blue	
"Milcor" No. 28 Gauge.	Doz.
5-inch	\$1 05
6-inch	1 20
7-inch	1 75

Special Corrugated

6-inch	\$1 00
7-inch	1 60

Adjustable—Uniform Blue

"Milcor" No. 28 Gauge. Uniform Blue.	
5-inch	\$1 65
6-inch	1 75
7-inch	2 10

WOOD FACES—50% off list.

FENCE	
726-6-12 1/2% (100 rods)	\$28 65
1943-6-14 1/2% (100 rods)	43 62

FILES AND RASPS

Heller's (American)	50-10%
American (American)	60-10%
Arcade	50%
Black Diamond	50%
Eagle	50%
Great Western	50%
Kearney & Foot	50%
McClellan	50%
Nicholson	50%
Simonds	60%

FIRE POTS

Clayton & Lambert's	
East of west boundary line of	
Province of Manitoba, Canada,	
No. Dakota, So. Dakota, Ne-	
braska, Kansas, Oklahoma, Ar-	
izona, San Angelo and Laredo,	
Texas	52 00
West of above boundary	48%

Geo. W. Diener Mfg. Co. Ea.

No. 02 Gasoline Torch, 1	
qt.,	\$ 5 55
No. 0250, Kerosene, or	
Gasoline Torch, 1 qt.	7 50
No. 10 Tinner's Furn.	
Square tank, 1 gal.	12 60
No. 15 Tinner's Furn.	
Round tank, 1 gal.	12 00
No. 21 Gas Soldering Fur-	
nace	3 60
No. 110 Automatic Gas	
Soldering Furnace	10 50

Double Blast Mfg. Co.

Gasoline, Nos. 26 and 28	60%
--------------------------	-----

Quick Meal Stove Co.

Vesuvius, F. O. B. St. Louis	30%
(Extra Disc't. for large	
quantities.)	

GALVANIZED WARE

Pails (Galv. after made),	
10-qt.	\$2 12
Tubs (Galv. after made),	
No. 1	6 00
No. 2	6 85

GLASS

Single Strength, A, 52-in.	
brackets	87%
Single Strength, A, 24 to 40-	
in. bracket	86%
Single Strength, A, all other	
brackets	89-5%
Double Strength, A, all sizes	89%

HANGERS

Conductor Pipe	
Milcor Perfection Wire	2 1/2 c
Milcor Triplex Wire	10 1/2 c

Eaves Trough

Milcor Steel (galv. after	
forming) List	plus 12 1/2 c
Milcor SolRock E. T. Wire,	
List	plus 50%

HOOKS

Box	
V. & B. No. 1, each	\$0 26

Conductor

"Direct Drive" Wrought	
Iron for wood or brick	15%

Hay

V. & B. No. 1, each	\$0 26
---------------------	--------

HUMIDIFIER

"Front-Rank," Automatic	
In single lots	50%
In lots of 10 or more	50-5%
In lots of 25 or more	50-10%
Vapor pans, etc., each	50%

LIFTERS

Stove Cover	
Coppered	per gro. \$6 00
Alaska	per gro. 4 75

MALLETS

Tinners	
Hickory	per doz. \$2 25

MITRES

Galvanized steel mitres.	
28 Ga.	70
26 Ga.	60-20

NAILS

You get real roof insurance
with
**TARGET AND ARROW
ROOFING TIN**

For it is fireproof and not just "fire resistive"—watertight and not just weathertight—actually diverts lightning and stays put in a gale of wind. But above all its protection is *lasting*, as proven by its many records of roofs that have served for fifty years and *more!*

N. & G. TAYLOR CO.
Philadelphia

Headquarters for Good Roofing Tin Since 1810



**EARLE'S
VENTILATOR**

**IMPROVED
REVOLVING**

It runs in a self-lubricating bearing that is not affected by heat or cold. It is noiseless and produces an upward current of air. No down draft. It will satisfy and give you a good profit.

ASK YOUR NEAREST JOBBER

BERGER BROS. CO.

229 to 237 ARCH STREET
WAREROOMS AND FACTORY: 100 TO 114 BREAD STREET
PHILADELPHIA, PA.
Manufacturers of "Quaker City" line of Miter, Ends, Caps and Outlets

PERFORATED METALS



All Sizes and Shapes of Holes
In Steel, Zinc, Brass, Copper, Tinplate, etc.
For All Screening, Ventilating and Draining
EVERYTHING IN PERFORATING METAL

THE HARRINGTON & KING PERFORATING CO.

5649 FILLMORE ST.—CHICAGO, ILL. U. S. A.
NEW YORK OFFICE: 114 LIBERTY ST.

ARMCO INGOT IRON
The Purest Iron Made

ARCHITECTS and Contractors are well acquainted with this long-lasting sheet metal. Our stock includes every size and gauge required by the trade.

"Since 1866" we have been serving and satisfying customers in all parts of the country.

Everything in Sheet Metal

Coke and Charcoal
Tin Plate
Roofing Plate
Conductor Pipe
Gutter
Tinner's Supplies

Brass—Copper
Nickel
(in all forms)
"Mond-70"
Babbitt
Solder



MERCHANT & EVANS CO.
MAIN OFFICE PHILADELPHIA.

WAREHOUSES

NEW YORK CLEVELAND
KANSAS CITY DETROIT
CHICAGO



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NETTING, POULTRY		ROOFING	
Galvanized before weav- ing	57 1/4-5%	Best Grade, slate surf, prepared	\$ 2 30
Galvanized after weaving	52 1/2-6%	Best talc surfaced	2 65
		Medium talc surfaced	2 00
		Light talc surfaced	1 30
		Red Rosin Sheeting, per ton	57 00
PASTE		SCREWS	
Asbestos Dry Paste:		Sheet Metal	
200-lb. Barrel	\$16 00	7, 1/4x1/2, per gross	\$0 53
100-lb. barrel	8 75	No. 10, 1/4x1/2, per gross	63
35-lb. pail	3 50	No. 14, 1/4x1/2, per gross	89
10-lb. bag	1 10		
5-lb. bag	60		
2 1/2-lb. cartons	35		
PIPE		SHEARS, TINNERS' & MACHINISTS'	
Conductor		Viking	\$23 00
Cor. Rd., Plain Rd., or Sq.		Lennox Throatless	
Galvanized		No. 18	35%
Crated and nested (all gauges)	75-2 1/4%	Shear blades	10%
Crated and not nested (all gauges)	70-15%	(f. o. b. Marshalltown, Iowa)	
Furnace Pipe		SHIELDS, REGISTER	
Double Wall Pipe and Fittings	60%	No. 1 "Gem" floor	\$12 00 doz.
Single Wall Pipe, Round	60%	No. 2 "Gem" wall	6 00 doz.
Galvanized Pipe	60%		
Galvanized and Tin Fittings	60%		
PIPE		SHOES	
Lead		Galv. 28 Gauge, Plain or corrugated round flat crimp	60%
Per 100 lbs.	\$12 50	26 gauge round flat crimp	45%
Stove Pipe		24 gauge round flat crimp	15%
"Milcor" "Titelock" Uniform Blue Stove		SNIPS, TINNERS	
28 gauge, 5 inch U. C.	10 50	Clover Leaf	40 & 10%
28 gauge, 6 inch U. C.	11 00	National	40 & 10%
28 gauge, 7 inch U. C.	13 00	Star	50%
30 gauge, 5 inch U. C.	9 00	Milcor	Net
30 gauge, 6 inch U. C.	10 00		
30 gauge, 7 inch U. C.	12 00	SQUARES	
T-Joint Made up		Steel and Iron	Net
6-inch, 28 ga.	per doz. \$ 4 00	(Add for bluing \$3 per doz. net)	
All Zinc		Mitre	Net
No. 11, all styles	60%	Try	Net
		Try and Bevel	Net
		Try and Mitre	Net
		Fox's	per doz. \$6 00
		Winterbottom's	10%
POKERS, STOVE		STOPPERS, FLUE	
W'r't Steel, str't or bent, per doz.	\$0 75	Common	per doz. \$1 10
Nickel Plated, coil handles, per doz.	1 10	Gem, No. 1	per doz. 1 10
		Gem, flat, No. 3	per doz. 1 00
POKERS, FURNACE		VENTILATORS	
Each	\$0 50	Standard	30 to 40%
PULLEYS		WIRE	
Furnace Tackle	per doz. \$0 60	Plain annealed wire, No. 3	per 100 lbs. \$3 05
Furnace Screw (enameled)	per doz. 75	Galvanized barb wire, per 100 lbs.	3 90
		Wire Cloth—black painted, 12-mesh, per 100 sq. ft.	1 85
Ventilating Register		Cattle Wire—galvanized catch weight spool, per 100 lbs.	3 80
Per gross	9 00	Galvanized Hog Wire, 30 rod spool, per spool	3 18
Small, per pair	30	Galvanized Plain Wire, No. 8, per 100 lbs.	3 85
Large, per pair	50	Stove Pipe, per stone	1 10
PUTTY		WRINGERS	
Commercial Putty, 100-lb. Kits	\$3 40	No. 790, Guarantee	each \$5 10
		No. 770, Bicycle	each 4 70
		No. 670, Domestic	each 4 35
		No. 110, Brighton	each 3 70
		No. 750, Guarantee	each 5 10
		No. 740, Bicycle	each 4 70
		No. 22, Pioneer	each 3 40
		No. 2, Superb	each 2 65
QUADRANTS			
Malleable Iron Damper	10%		
REDUCERS—Oval Stove Pipe			
Per Doz.			
7-6, 28-gauge, 1 doz. in carton	\$2 00		
REGISTERS AND BORDERS			
Baseboard, Floor and Wall.			
Cast Iron	20%		
Steel and Semi-Steel	40-10%		
Baseboard	40-10%		
Wall	40-10%		
Adjustable Ceiling Ventilators	40-10%		
Register Faces—Cast and Steel			
Japanned, Bronzed and Plated, 4x6 to 14x14	40-10%		
Large Register Faces—Cast	60-10%		
14x14 to 38x42	60-10%		
Large Register Faces—Steel	65-10%		
14x14 to 38x42	65-10%		
RIDGE ROLL			
Galv., Plain Ridge Roll, b'd'd	75-10-5%		
Galv., Plain Ridge Roll, crated	75-10%		
Globe Finials for Ridge Roll	50%		

MARSHALLTOWN**Throatless Shears**

HERE is a machine that will do all your sheet cutting. It takes sheets of any size and does accurate work quickly. It is our No. 18 Hand Power Shear, the size for the average shop. It is high grade throughout, being made of the strongest and toughest metals. It sells at a price which makes it possible for you to own one NOW.

Covered By Patent
No. 1026508

Address Dept. A. A. and ask for our catalog and price list covering our entire line.

MARSHALLTOWN MFG. CO., Marshalltown, Iowa

RYERSON

IMMEDIATE SHIPMENT FROM STOCK

More than twenty kinds of sheets are carried in stock. Also Bars, Angles, Rivets, Bolts, Tools and Metal-Working Machinery.

Write for Journal and Stock List

JOSEPH T. RYERSON & SON INC.

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Boston
Buffalo

SHEETS**The NEW IMPROVED "STANDARD"****ROTABLE VENTILATOR**

THIS favorite ventilator has been further improved to insure—



Patented

New made
of
ARMCO IRON

Greater Durability
Quieter Operation
Greater Efficiency
Better Balance

The New Cone-top Suspension, new Bronze Guide Bushings, and Cross Braced Skirt are the new features.

Let us tell you in detail all about this better ventilator.

Write for special circular and prices today

"Standard" Ventilator and Chimney Cap—Most Efficient Combination on the market.

STANDARD VENTILATOR CO.,

LEWISBURG, PA.

**ARMCO**

INGOT IRON

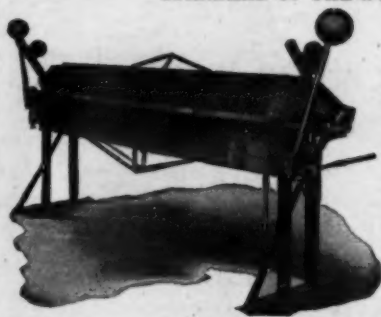
RESISTS RUST

It's ductile—forms easily.
Cuts cost—in shop and on the job.
Insures contented customers.
Is easier to sell—prospects know it.

ARMCO Distributors Ass'n of America
Executive Offices, Middletown, Ohio

CHICAGO STEEL CORNICE BRAKES

STANDARD OF THE WORLD



THE BEST BRAKE FOR ALL PURPOSES: Most Durable, Easiest Operated, Low in Price. Made in All Lengths and to Bend All Gauges of Metal. Over 25,000 in use.

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PARTICULARS

DREIS & KRUMP MFG. CO., 7404 Loomis Street, CHICAGO

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The 13-Cylinder Ventilator
Used in Every State
in the Union.

The home should be properly ventilated—few of them are. Here is a sales opportunity often overlooked by the average Sheet Metal Worker, but one which offers a lucrative business to those who take advantage of it.

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Vent. Makers Since 1886

SPECIFY ÆOLUS
VENTILATORS

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GEROCK BROS. MFG. CO.

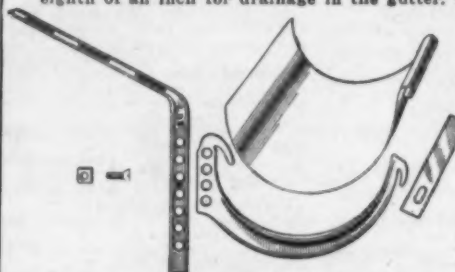
SHEET METAL ORNAMENTS
AND STATUARY

1252 So. Vandeventer Ave., St. Louis, Mo., U.S.A.

Write for Catalogue

ROOF GUTTER SUPPORTS

This illustration shows, unassembled, one of the many styles of eaves trough hangers made by us which may be adjusted every eighth of an inch for drainage in the gutter. These hangers are



widely used throughout the United States. Write for catalog No. 3, which also illustrates and describes conductor hooks and fasteners.

Free Samples
Gladly Fur-
nished.

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Chicago, Ill.

Bolts—Stove.
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Cleveland, Ohio
Lamson & Sessions Co.,
Cleveland, Ohio
Ryerson & Son, Inc.,
Jos. T.,
Chicago, Ill.

Brakes—Bending.
Dreis & Krump Mfg. Co.,
Chicago, Ill.
Ryerson & Son, Inc.,
Jos. T.,
Chicago, Ill.

Brakes—Cornice.
Dreis & Krump Mfg. Co.,
Chicago, Ill.

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Waterbury, Conn.
Copper & Brass Research As-
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New York
Merchant & Evans Co.,
Philadelphia, Pa.

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Cleveland, Ohio

Castings—Malleable.
Fanner Mfg. Co., Cleveland, Ohio

Ceilings—Metal.
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Chicago, Ill.
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Wheeling Corrugating Co.,
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Milwaukee, Wis.

Copper.
American Brass Co.,
Waterbury, Conn.
Copper & Brass Research As-
sociation,
New York

Cornices.
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Chicago, Ill.

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Milwaukee Corrugating Co.,
Mil., Ch'go, La Crosse, Kan. City
Oxweld Acetylene Co.,
New York, N. Y.

Cut-offs—Rain Water.
Milwaukee Corrugating Co.,
Mil., Ch'go, La Crosse, Kan. City

Dampers—Quadrants—Accessories.
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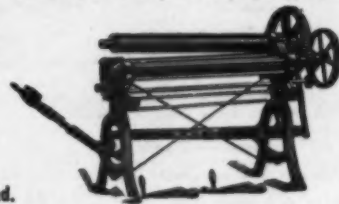
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FOR SALE—Tin shop in Marengo, Illinois, population 2,000; only shop in town. Address Henry Doll, Marengo, Illinois. F-466

BUSINESS CHANCES

For Sale—Sheet metal and furnace shop in county seat town of 3,500 population in Northeastern Iowa. Good set of tools and good business. Shop 25x40. Address H-466, AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

SITUATION WANTED

Position wanted by all around hardware man, also has fair knowledge of tinning and plumbing; last position as manager of store for nine years; one year as hardware salesman; permanent position only considered; married and reliable; can begin work at once; can give good references; middle west preferred. Address C-466, AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

Position Wanted—An A-1 all around sheet metal worker and layout man, age 47, wants a steady job; 34 years' experience in every phase of sheet metal work; sober, steady and a hard worker; experienced at cornice, skylight, heating and ventilating, blow piping, etc. Please state particulars and wages. Address X-465, AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

Situation Wanted by May 1—Estimator and layout man capable of taking charge of tin shop. Have had factory, heating and blow pipe experience and know the Standard Code; am 36 years old and married; had 18 years at the trade; want steady position with reliable firm. Address A-466, AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

Position Wanted—As working foreman. By first class sheet metal worker in all its branches. Such as may come to any first class shop. Can read blueprints and figure work. Have been handling men in all branches of tin and sheet metal work for past twenty years. Can furnish best of references. Address Edward G. Collins, 502 Broad Street, West Durham, North Carolina. P-465

Situation wanted by first class sheet metal worker with 25 years' experience. Can read blue prints and cut patterns for all kinds of sheet metal work, and lay out heating systems for all sizes of homes; will take charge of shop and handle men and work for employer's interests. Address W. M. Laudenschlager, 2106 Indiana Avenue, Columbus, Ohio. Y-465

Position Wanted—I am looking for a position with a furnace manufacturing company that makes furnace fittings or does installation work; position must be a year around one and location in Eastern Ohio, New York or Northern Pennsylvania preferred. Address Z-465, AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

Position wanted by first class tinner with 30 years' experience in general tin and furnace work. Have done all kinds of metal roofing, slate, tile, asbestos and built up roofings; have good habits and am married; want steady job in southern Illinois. Address W-465, AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

Sheet Metal Estimator—Heating and ventilating sheet metal roofing estimator wants position. Am a practical man and a good business getter; have done some of the biggest jobs in the country; can handle work in field, lay out my own sketches; can start about March 1st, 1928. Address Sheet Metal, Box 269, Youngstown, Ohio. B-466

Position Wanted—Married man 30 years of age wants steady job in small shop in North Dakota. Understands Standard Code. 10 years' experience as tinner and furnace man. Can come at once. Address M. A. Hunter, 619 6th Street, Bismarck, N. D. L-465

Situation Wanted—By first class sheet metal worker. Can also do plumbing. Address Plumber, 30 East 4th Avenue, Spokane, Washington. M-465

SITUATION WANTED

Situation Wanted—Have you an opening for a high class stove salesman for Chicago and vicinity to sell on commission? Am well acquainted with all the trade for the past 15 years and can furnish satisfactory references. Have been manufacturing stoves but sold out my interests and I am going to devote all my time to selling. Address R-466, AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

Situation Wanted—I would like to locate with a hardware company doing retail business in a town from 2,500 to 6,000 population. I have been in the hardware and sheet metal game for about 15 years, mostly in country towns. I have had experience in farm machinery and windmills. Can go to work after March 1st. Address Q-466, AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

Position Wanted—By tinner and plumber of twenty-five years' experience, sober, industrial and reliable. Can do hot water and steam heating. Install warm air furnaces the Standard Code way. State wages in first letter for steady job. Address Tinner and Plumber, 255 West Homer Street, Freeport, Illinois. O-465

Position Wanted—As sheet metal worker. First class furnace man 25 years at the trade. Last five years in business for myself. Can also do plumbing and hot water heating. Want a steady job and prefer South Dakota or Iowa. State particulars and wages in your letter. Address Box 145, Parkston, South Dakota. P-466

Position Wanted—As working foreman by a first class sheet metal worker in all its branches such as may come to a first class shop. Can do pattern drafting, read blue prints and figure work. Have had 16 years of experience and married. Address O-466, AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

Position Wanted—First class sheet metal worker, pattern cutter and estimator. 22 years' experience in the trade in all its branches. Reference from present and former employers if desired both as to character and ability. Address S-466, AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

Position Wanted—By first class furnace installer capable of taking charge of shop and handling men. First class pattern cutter and can work from blue prints. Have had 25 years' experience, married and want a steady job at reasonable living wages. Can come at once. Address Bert Hawkins, Dexter, Michigan. T-466

Position wanted by a first class tinner. Can draft my own patterns, read blue prints and do inside and outside work. Married, 30 years of age, with 12 years' experience. Address S-465, AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

Position wanted by first class sheet metal worker and furnace man; 16 years' experience; can lay out most patterns and do furnace engineering, erect any furnace; also lay slate. Available at once. Address Box 325, Rochester, New York. T-465

Position Wanted—By tinner and plumber of 10 years' experience. Sober and industrious worker. Want to make a change, have steady work and will go anywhere. State wages. Address Tinner & Plumber, Box 373, Hemingford, Nebraska. J-466

HELP WANTED

Wanted—First class sheet metal worker and furnace man as working foreman, steady position and good opportunity for right man. Must be able to figure work, get results from men and to handle any work coming into the shop. Boozers not wanted. Prefer man who has been in business for himself. Can invest some money if you desire. Address Q-465, AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Ill.

Mention AMERICAN ARTISAN in your reply—Thank you!

HELP WANTED

Wanted—In North Dakota town, an all round man in hardware store shop. Labor consists of anything that comes along such as repair work of all kinds—furnace, plumbing, heating and tinwork, in well equipped shop. A steady man with family preferred. Good wages the year round. Let us hear from you. Address G-466, AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

Wanted: First Class sheet metal worker. One who is neat and can turn a finished job in a reasonable time. Have a year around job with no lay offs for the right man. Prefer middle-aged married man. Address F-465, AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Ill.

Wanted—First class sheet metal worker under 40 to take charge of shop. Small manufacturing concern in central Washington. Must be steady and a fast worker. Can invest capital if desired. Address R-465, AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago.

Wanted — An industrious go-getter. Must have experience in plumbing and tinners trade. Must be honest, reliable and sober and able to manage one of our shops. Address Illinois Plumbing and Heating Co., Du Quoin, Illinois. M-466

TINNERS' TOOLS

For Sale—1 No. 928 Creasing stake, 1 No. 477 large burring machine with stand, 1 No. 110 groover. All P. S. & W. make and in good condition. Prices on application. Might consider exchange for other tools. Can use No. 446 large turner, No. 545 small turner, No. 550 elbow machine with 1½ in. face. Must be encased, with stands and in good condition. Address Box 216, Saybrook, Illinois. D-465

For Sale—1 large pair roofing tongs, 1 pair large gutter tongs, 1 4 ft. steel straight edge, 1 set slater's tools, ripper, stake and hammer. These tools are practically new and can be bought for \$15.00. Address K-466, AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

For Sale—Biglows pat. 30 inch grooving machine for furnace and stove pipe flattens seam on return and releases mandrel so pipe can be removed. Good as new. Cost \$60.00, will sell for \$35.00 F. O. B. Sedalia, Missouri. Address The Sedalia Sheet Metal Works, 114 West Second Street, Sedalia, Missouri. L-466

Tools for Sale—1 No. 4 Packham spiral crimper and beader, nearly new, \$5.00. Big assortment of plumbing tools at a bargain. Tell us what you need and we will make a price. Address Willard Warstler, Goshen, Ind. E-465

For Sale—One set Niagara double seamers and roofing tongs in good condition; price reasonable. Enquire Redlich & Son, Jerseyville, Ill. C-465

MISCELLANEOUS

For Sale—1922 National Cash Register, electric type, A-1 condition, mahogany finish. Original price \$400.00—will sell for \$275.00. Address W-466, AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago.

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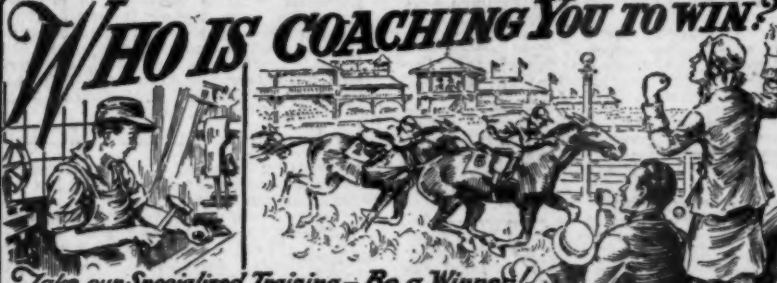
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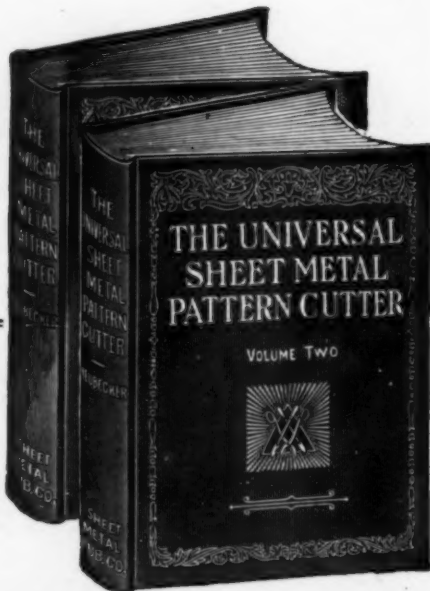
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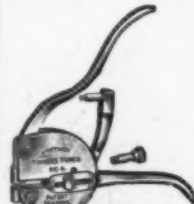


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